10/658,417

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1204bxd

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS 4	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAplus
NEWS 5	FEB 05	German (DE) application and patent publication number format changes
NEWS 6	MAR 03	MEDLINE and LMEDLINE reloaded
NEWS 7	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS 8	MAR 03	FRANCEPAT now available on STN
NEWS 9	MAR 29	Pharmaceutical Substances (PS) now available on STN
NEWS 10	MAR 29	WPIFV now available on STN
NEWS 11	MAR 29	New monthly current-awareness alert (SDI) frequency in RAPRA
NEWS 12	APR 26	PROMT: New display field available
NEWS 13	APR 26	IFIPAT/IFIUDB/IFICDB: New super search and display field available
NEWS 14	APR 26	LITALERT now available on STN
NEWS 15	APR 27	NLDB: New search and display fields available
NEWS 16	May 10	PROUSDDR now available on STN
NEWS 17	May 19	PROUSDDR: One FREE connect hour, per account, in both May and June 2004
NEWS 18	May 12	EXTEND option available in structure searching
NEWS 19	May 12	Polymer links for the POLYLINK command completed in REGISTRY
NEWS 20	May 17	FRFULL now available on STN
NEWS 21	May 27	STN User Update to be held June 7 and June 8 at the SLA 2004 Conference
NEWS 22	May 27	New UPM (Update Code Maximum) field for more efficient patent SDIs in CAplus
NEWS 23	May 27	CAplus super roles and document types searchable in REGISTRY
NEWS 24	May 27	Explore APOLLIT with free connect time in June 2004

NEWS EXPRESS	MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific

research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 19:07:34 ON 08 JUN 2004

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 19:07:52 ON 08 JUN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 7 JUN 2004 HIGHEST RN 690625-61-7
DICTIONARY FILE UPDATES: 7 JUN 2004 HIGHEST RN 690625-61-7

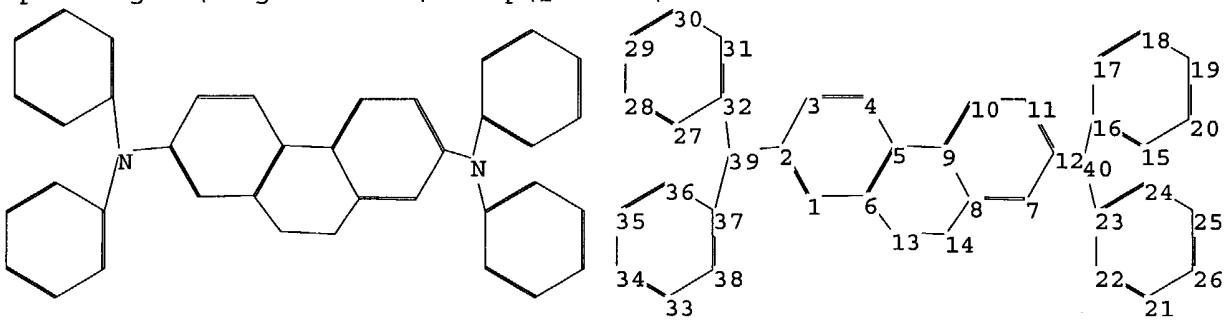
TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
Uploading C:\Program Files\Stnexp\Queries\10658417.str



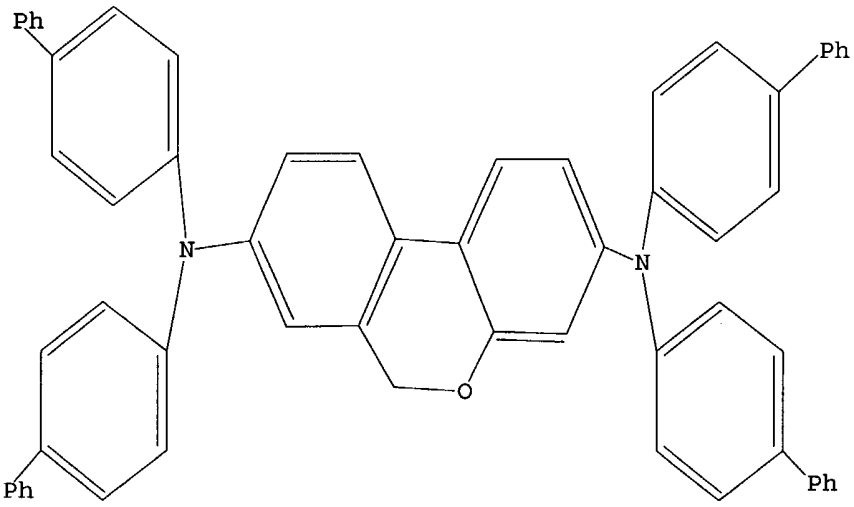
chain nodes :
39 40
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
chain bonds :
2-39 12-40 16-40 23-40 32-39 37-39
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-9 6-13 7-8 7-12 8-9 8-14 9-10 10-11 11-12 13-14 15-16 15-20 16-17 17-18 18-19 19-20 21-22 21-26 22-23 23-24 24-25 25-26 27-28 27-32 28-29 29-30 30-31 31-32 33-34 33-38 34-35 35-36 36-37

exact/norm bonds :
2-39 5-9 6-13 8-14 12-40 13-14 16-40 23-40 32-39 37-39
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 15-16 15-20
16-17 17-18 18-19 19-20 21-22 21-26 22-23 23-24 24-25 25-26 27-28 27-32
28-29 29-30 30-31 31-32 33-34 33-38 34-35 35-36 36-37 37-38

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
29:Atom 30:Atom 31:Atom 32:Atom 33:Atom 34:Atom 35:Atom 36:Atom 37:Atom
38:Atom 39:CLASS 40:CLASS

L1 STRUCTURE UPLOADED

=> d query
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 19:08:18 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 6 TO ITERATE

100.0% PROCESSED 6 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 6 TO 266
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

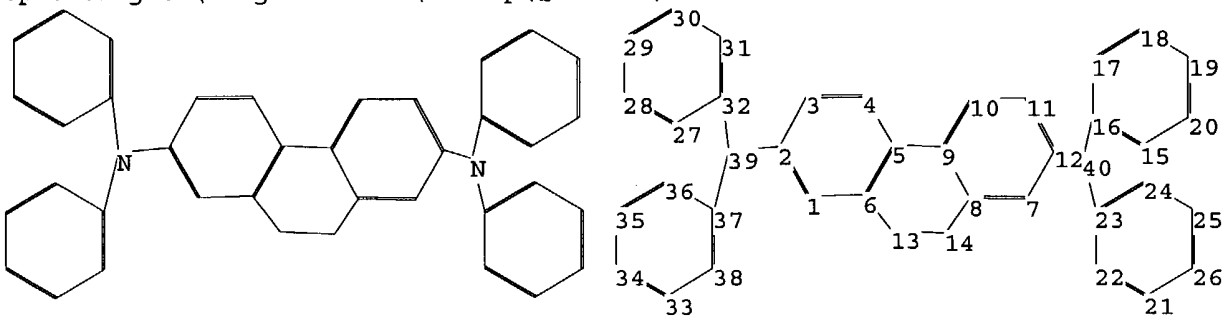
=> s l1 full
FULL SEARCH INITIATED 19:08:21 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 129 TO ITERATE

100.0% PROCESSED 129 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L3 0 SEA SSS FUL L1

=>
Uploading C:\Program Files\Stnexp\Queries\10658417.str

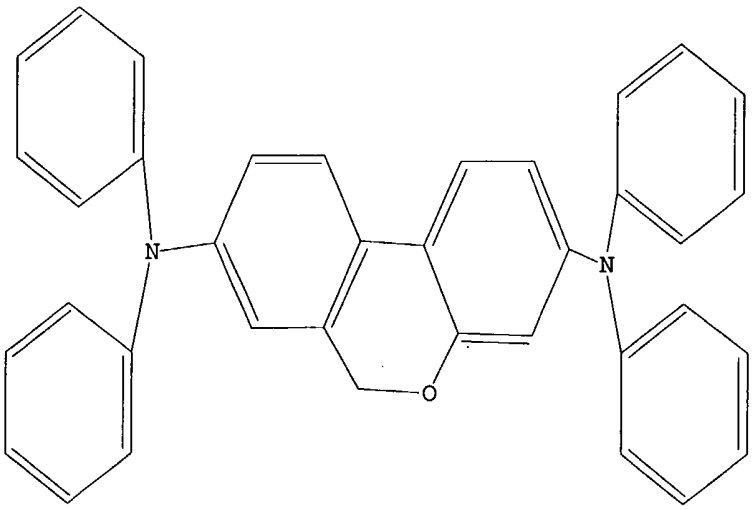


chain nodes :
39 40
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
chain bonds :
2-39 12-40 16-40 23-40 32-39 37-39
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-9 6-13 7-8 7-12 8-9 8-14 9-10 10-11 11-12
13-14 15-16 15-20 16-17 17-18 18-19 19-20 21-22 21-26 22-23 23-24 24-25
25-26 27-28 27-32 28-29 29-30 30-31 31-32 33-34 33-38 34-35 35-36 36-37
37-38
exact/norm bonds :
2-39 5-9 6-13 8-14 12-40 13-14 16-40 23-40 32-39 37-39
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 15-16 15-20
16-17 17-18 18-19 19-20 21-22 21-26 22-23 23-24 24-25 25-26 27-28 27-32
28-29 29-30 30-31 31-32 33-34 33-38 34-35 35-36 36-37 37-38

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
29:Atom 30:Atom 31:Atom 32:Atom 33:Atom 34:Atom 35:Atom 36:Atom 37:Atom
38:Atom 39:CLASS 40:CLASS

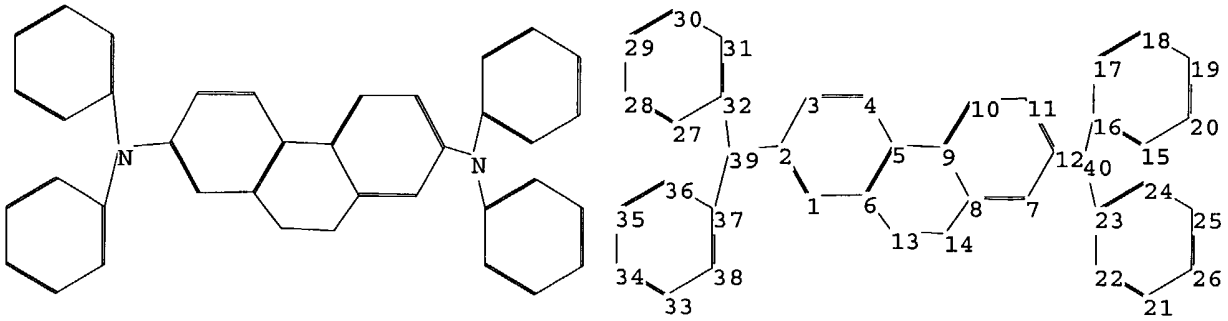
L4 STRUCTURE UPLOADED

=> d query
L4 STR



Structure attributes must be viewed using STN Express query preparation.

```
=> s l4
SAMPLE SEARCH INITIATED 19:13:51 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     23 TO ITERATE

100.0% PROCESSED      23 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          173 TO      747
PROJECTED ANSWERS:               0 TO        0

L5            0 SEA SSS SAM L4

=> s l4 full
FULL SEARCH INITIATED 19:13:56 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    514 TO ITERATE

100.0% PROCESSED     514 ITERATIONS                               0 ANSWERS
SEARCH TIME: 00.00.01

L6            0 SEA SSS FUL L4

=>
Uploading C:\Program Files\Stnexp\Queries\10658417.str
```

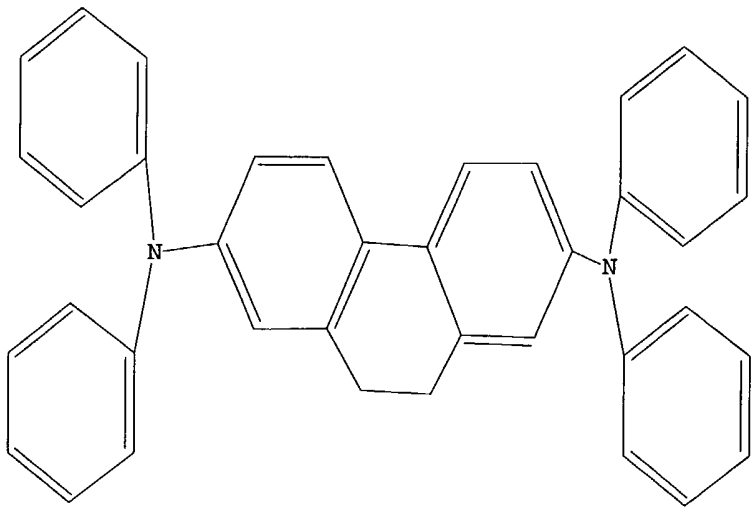


chain nodes :
39 40
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
chain bonds :
2-39 12-40 16-40 23-40 32-39 37-39
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-9 6-13 7-8 7-12 8-9 8-14 9-10 10-11 11-12
13-14 15-16 15-20 16-17 17-18 18-19 19-20 21-22 21-26 22-23 23-24 24-25
25-26 27-28 27-32 28-29 29-30 30-31 31-32 33-34 33-38 34-35 35-36 36-37
37-38
exact/norm bonds :
2-39 5-9 6-13 8-14 12-40 13-14 16-40 23-40 32-39 37-39
normalized bonds :
1-2 1-6 2-3 3-4 4-5 5-6 7-8 7-12 8-9 9-10 10-11 11-12 15-16 15-20
16-17 17-18 18-19 19-20 21-22 21-26 22-23 23-24 24-25 25-26 27-28 27-32
28-29 29-30 30-31 31-32 33-34 33-38 34-35 35-36 36-37 37-38

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom 24:Atom 25:Atom 26:Atom 27:Atom 28:Atom
29:Atom 30:Atom 31:Atom 32:Atom 33:Atom 34:Atom 35:Atom 36:Atom 37:Atom
38:Atom 39:CLASS 40:CLASS

L7 STRUCTURE UPLOADED

=> d query
L7 STR



Structure attributes must be viewed using STN Express query preparation.

```
=> s l7
SAMPLE SEARCH INITIATED 19:14:31 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     700 TO ITERATE

100.0% PROCESSED     700 ITERATIONS                                 8 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        12413 TO    15587
PROJECTED ANSWERS:               8 TO      329

L8             8 SEA SSS SAM L7

=> s l7 full
FULL SEARCH INITIATED 19:14:36 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -  14055 TO ITERATE

100.0% PROCESSED   14055 ITERATIONS                             114 ANSWERS
SEARCH TIME: 00.00.01

L9           114 SEA SSS FUL L7

=> fil caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   469.62     469.83

FILE 'CAPLUS' ENTERED AT 19:14:39 ON 08 JUN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)
```

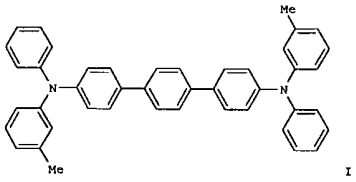
FILE COVERS 1907 - 8 Jun 2004 VOL 140 ISS 24
FILE LAST UPDATED: 7 Jun 2004 (20040607/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l9
L10 51 L9

=> d l10 1-51 abs ibib hitstr

L10 ANSWER 1 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

AB This invention pertains to a method for producing arylamines, which comprises reacting an aromatic halogen compound with an aromatic amine in the presence of an organic salt selected among specific pyridinium salts, imidazolium salts, and quaternary onium salts, a copper catalyst, and a base. For example, N-(3-methylphenyl)-N-phenylamine was reacted with 4,4''-diiodoterphenyl in toluene in the presence of KOH, CuCl, and Bu4PBr to give the amine I (94.0%). By the process, a high-purity arylamine, especially triarylamine or diarylamine, can be produced at low cost.

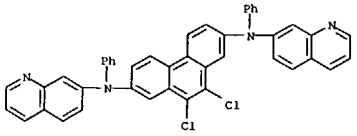
ACCESSION NUMBER: 2004:252470 CAPLUS
DOCUMENT NUMBER: 140:287163
TITLE: Process for preparation of arylamines
INVENTOR(S): Kubo, Shinji; Shintou, Taichi; Aoki, Hidenori
PATENT ASSIGNEE(S): Sankio Chemical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024670	A1	20040325	WO 2003-JP11510	20030909

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

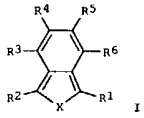
PRIORITY APPLN. INFO.: JP 2002-264202 A 20020910
OTHER SOURCE(S): CASREACT 140:287163
IT **675583-40-1P**

L10 ANSWER 1 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of arylamines by coupling reaction)
RN 675583-40-1 CAPLUS
CN 2,7-Phenanthrenediamine, 9,10-dichloro-N,N'-diphenyl-N,N'-di-7-quinolinyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

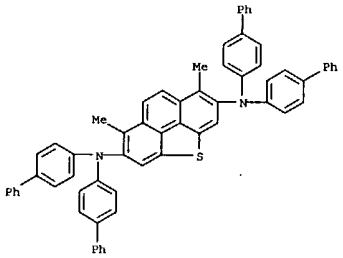
AB The derivs. are I [X = S, SO, SO2; R1-R6 = H, alkyl(oxy or -thio), aryl(oxy or -thio), heterocycle, cyano, amino]. Organic electroluminescent devices including I in emission layers and/or hole- or electron-injecting layers and showing high luminescent intensity and long life, are also claimed.

ACCESSION NUMBER: 2004:52908 CAPLUS
DOCUMENT NUMBER: 140:101794
TITLE: Long-life organic electroluminescent devices and (oxidized) isobenzothiophene derivatives therefor
INVENTOR(S): Suda, Yasumasa; Onikubo, Shunichi
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004018665	A2	20040122	JP 2002-175186	20020617

PRIORITY APPLN. INFO.: JP 2002-175186 20020617
OTHER SOURCE(S): MARPAT 140:101794
IT **643768-23-4**
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(emitting layers; long-life and high-luminance organic electroluminescent devices containing (oxidized) isobenzothiophene derivs.)
RN 643768-23-4 CAPLUS
CN Phenanthro[4,5-bcd]thiophene-2,6-diamine, N,N,N',N'-tetrakis([1,1'-biphenyl]-4-yl)-1,7-dimethyl- (9CI) (CA INDEX NAME)

L10 ANSWER 2 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L10 ANSWER 3 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB An electrophotog. imaging member comprises a substrate, a charge generating layer, and a charge transport layer. The charge transport layer comprises a binder and charge transport mols., wherein the binder eliminates or minimizes crystallization of the charge transport mols. Optionally, an electrophotog. imaging member comprises a substrate and a single charge generating and charge transport layer. The single charge generating and charge transport layer comprises a binder, charge generating mols. and charge transport mols., wherein the binder eliminates or minimizes crystallization of the charge transport mols. Specific binders are PCZ 800, a PCZ 500, or a PCZ 400 polycarbonate resin.

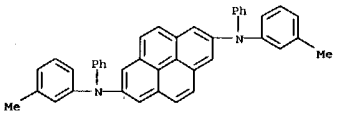
ACCESSION NUMBER: 2003:887644 CAPLUS
DOCUMENT NUMBER: 139:388417
TITLE: Electrophotographic imaging members
INVENTOR(S): Fu, Min-Hong; Helbig, Colleen A.; Evans, Kent J.; Carmichael, Kathleen M.; Schneider, June E.; Skinner, David M.; Willnow, Alfred H.
PATENT ASSIGNEE(S): Xerox Corporation, USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6645686	B1	20031111	US 2002-205127	20020723

PRIORITY APPLN. INFO.: US 2002-205127 20020723

IT **143141-30-4**
RL: TEM (Technical or engineered material use); USES (Uses)
(charge transport agent; electrophotog. imaging members containing)

RN 143141-30-4 CAPLUS
CN 2,7-Pyrenediamine, N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

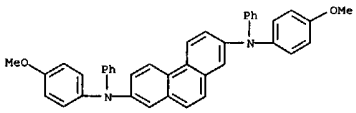
L10 ANSWER 4 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The authors describe the synthesis and nonlinear absorption properties of triarylamine derivs. Six mols. were synthesized by using a double Ullmann coupling procedure. UV-visible absorption spectra show the excellent transparency of these triarylamine derivs. in the visible range (λcut-off ≤ 420 nm). Nonlinear absorption measurements show a broadband nonlinear absorption range extending between 450-650 nm with an optimized efficiency for a planar conjugated system (9,9-diethyl-N,N'-bis(4-methoxyphenyl)-N,N'-diphenyl-9H-fluorene-2,7-diamine) or a hindered donor group (N,N'-bis(4-methoxy-2-methylphenyl)-N,N'-bis(2-methylphenyl)[1,1'-biphenyl]-4,4'-diamine). These data were interpreted by a two step three-photon absorption scheme: a TPA process followed by an S1 → Sn ESA step; the product of both spectra is qual. in good agreement with nonlinear absorption spectra, leading to different mol. engineering approaches for optimization of these features in the visible range through TPA and/or ESA properties.

ACCESSION NUMBER: 2003:651204 CAPLUS
DOCUMENT NUMBER: 139:395560
TITLE: Optical limiting in the visible range: molecular engineering around N4,N4'-bis(4-methoxyphenyl)-N4,N4'-diphenyl-4,4'-diaminobiphenyl
AUTHOR(S): Anemian, Remi; Morel, Yannick; Baldeck, Patrice L.; Paci, Barbara; Kretsch, Kevin; Nunzi, Jean-Michel; Andraud, Chantal
CORPORATE SOURCE: Laboratoire de Chimie, ENS-Lyon and CNRS, Lyon, 69364, Fr.
SOURCE: Journal of Materials Chemistry (2003), 13(9), 2157-2163
CODEN: JMACEP; ISSN: 0959-9428
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:395560

IT **357291-35-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(three photon and nonlinear absorption; optical limiting in visible range and mol. engineering around N4,N4'-bis(4-methoxyphenyl)-N4,N4'-diphenyl-4,4'-diaminobiphenyl)

RN 357291-35-1 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis(4-methoxyphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L10 ANSWER 5 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The invention refers to an organic electroluminescent device comprising a perylene derivative and a diketopyrrolopyrrole derivative The device may also contain a compound having a fluorescence peak > 550 nm, and 5% of another compound relative to the first having a fluorescence spectrum 500 - 800 nm wherein the region > 600 nm is < 20% of the entire spectrum.

ACCESSION NUMBER: 2003:454417 CAPLUS
DOCUMENT NUMBER: 139:28484
TITLE: Composite for organic electroluminescent device comprising perylene and diketopyrrolopyrrole derivatives
INVENTOR(S): Onikubo, Toshikazu; Oryu, Yoshitake; Amano, Masaomi; Maki, Shinichiro; Yanai, Hiroyuki; Yagi, Tadao
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: PCT Int. Appl., 75 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

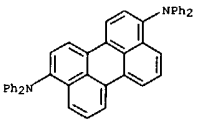
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003048268	A1	20030612	WO 2002-JP12592	20021202

W: CN, JP, KR, US
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR

PRIORITY APPLN. INFO.: JP 2001-368036 A 20011203
JP 2002-18009 A 20020128
OTHER SOURCE(S): MARPAT 139:28484

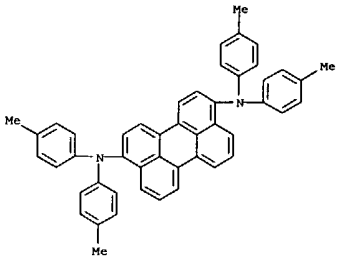
IT **227009-36-1 252756-13-1 384343-49-1**
536761-44-1 536761-45-2
RL: DEV (Device component use); USES (Uses)
(composite for organic electroluminescent device comprising perylene and diketopyrrolopyrrole derivs.)

RN 227009-36-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetraphenyl- (9CI) (CA INDEX NAME)

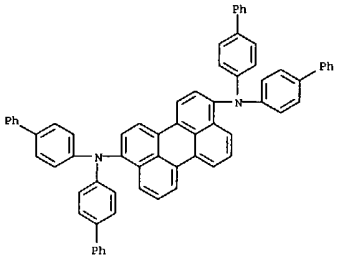


RN 252756-13-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 5 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

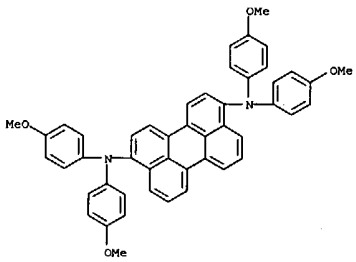


RN 384343-49-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis[1,1'-biphenyl]-4-yl- (9CI) (CA INDEX NAME)

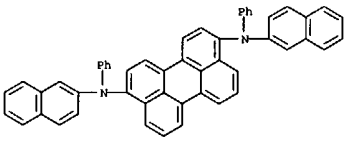


RN 536761-44-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis(4-methoxyphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 5 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 536761-45-2 CAPLUS
CN 3,10-Perylenediamine, N,N'-di-2-naphthalenyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The title organic TFTs contain X[NAr1Ar2]n (Ar1, Ar2 = C6-20 (substd.) aromatic hydrocarbon or aromatic heterocyclic group, wherein Ar1 and Ar2 may bonded together to form a ring each other; X = 1-4 valent (substd.) C6-34 condensed aromatic hydrocarbon group compound). The organic compds. give TFTs high electron mobility and high ON/OFF-current-ratio.

ACCESSION NUMBER: 2003:317922 CAPLUS
DOCUMENT NUMBER: 138:347368
TITLE: High electron-mobility and high ON/OFF-current-ratio organic thin-film transistors
INVENTOR(S): Higashiguchi, Itaru; Oda, Atsushi; Ishikawa, Hitoshi
PATENT ASSIGNEE(S): NEC Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 77 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003124472	A2	20030425	JP 2001-320342	20011018
CN 1412864	A	20030423	CN 2002-147242	20021018

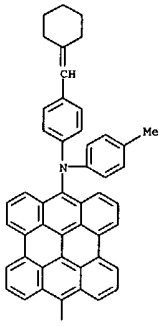
PRIORITY APPLN. INFO.: JP 2001-320342 A 20011018

IT **426218-33-9 426218-35-1 515833-69-9 515833-71-3 515833-90-6 515833-92-8 515834-10-3**
RL: DEV (Device component use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(high electron-mobility and high ON/OFF-current-ratio organic aromatic-heterocyclic compound thin-film transistors)

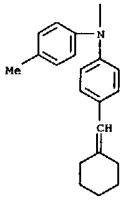
RN 426218-33-9 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N'-bis[4-(cyclohexylidenemethyl)phenyl]-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



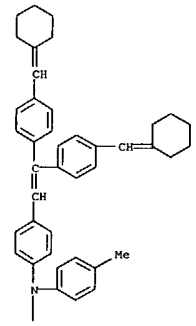
PAGE 2-A



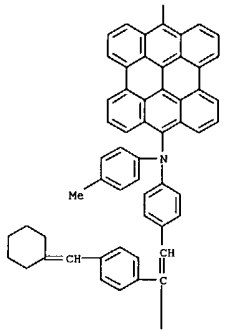
RN 426218-35-1 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N'-bis[4-[2,2-bis[4-(cyclohexylidenemethyl)phenyl]ethenyl]phenyl]-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A

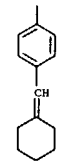


PAGE 2-A

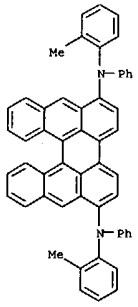


L10 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 3-A



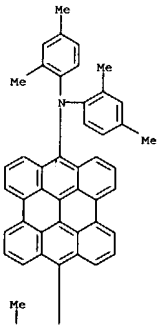
RN 515833-69-9 CAPLUS
CN Dibenzo[a,o]perylene-1,6-diamine, N,N'-bis(2-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



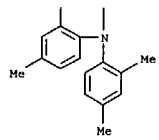
RN 515833-71-3 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N,N',N'-tetrakis(2,4-dimethylphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



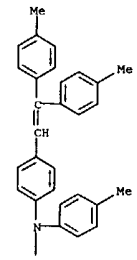
PAGE 2-A



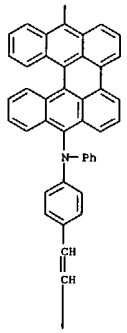
RN 515833-90-6 CAPLUS
CN Dibenzo[a,o]perylene-7,16-diamine, N,N'-bis[4-[2,2-bis(4-methylphenyl)ethenyl]phenyl]-N-(4-methylphenyl)-N'-phenyl- (9CI) (CA INDEX NAME)

L10 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A

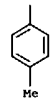


PAGE 2-A



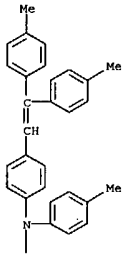
L10 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 3-A



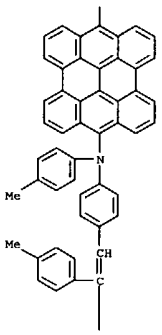
RN 515833-92-8 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N'-bis[4-[2,2-bis(4-methylphenyl)ethenyl]phenyl]-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

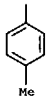


L10 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 2-A



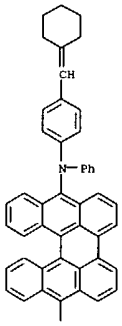
PAGE 3-A



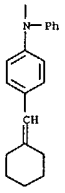
RN 515834-10-3 CAPLUS
CN Dibenzo[a,o]perylene-7,16-diamine, N,N'-bis[4-(cyclohexylidenemethyl)phenyl]-N,N'-diphenyl- (9CI) (CA INDEX NAME)

L10 ANSWER 6 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 2-A



L10 ANSWER 7 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The invention refers to an electroluminescent device comprising a phenanthrene derivative for blue luminescence, synthesis of the phenanthrene derivative and intermediates.

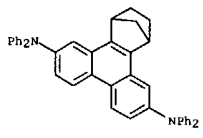
ACCESSION NUMBER: 2003:150131 CAPLUS
DOCUMENT NUMBER: 138:212562
TITLE: Phenanthrene derivatives and synthesis, synthesis of intermediates and organic electroluminescent component
INVENTOR(S): Weiselltel, Frank
PATENT ASSIGNEE(S): Sony Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 32 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003055276	A2	20030226	JP 2001-243566	20010810

PRIORITY APPLN. INFO.: JP 2001-243566 20010810
OTHER SOURCE(S): MARPAT 138:212562

IT **500222-10-6P**
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(phenanthrene derivs. and synthesis, synthesis of intermediates and organic electroluminescent component)

RN 500222-10-6 CAPLUS
CN 1,4-Methanotriphenylene-6,11-diamine, 1,2,3,4-tetrahydro-N,N,N',N'-tetraphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 8 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB 3,4,9,10-Tetra(disubstituted amino)perylenes, useful as red-emitting materials for organic electroluminescent displays, are prepared by treating 3,4,9,10-tetracarboxyperylene (I) with NH3 or aromatic primary amines, treating the resulting 3,4,9,10-tetracarbamoylperylenes with Br2 in the presence of alkalis, and reacting the resulting 3,4,9,10-tetra(amino or monosubstituted amino)perylenes with aromatic halogen compds. in the presence of alkalis. Preparation of 3,4,9,10-tetrakis(diphenylamino)perylene from I via its tetraamide and 3,4,9,10-tetraaminoperylene was shown.

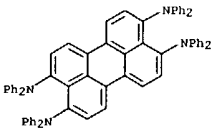
ACCESSION NUMBER: 2003:34908 CAPLUS
DOCUMENT NUMBER: 138:89589
TITLE: Preparation of 3,4,9,10-tetra(disubstituted amino)perylenes and their intermediates
INVENTOR(S): Toba, Yasumasa; Kanno, Masaki
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003012612	A2	20030115	JP 2001-197932	20010629

PRIORITY APPLN. INFO.: JP 2001-197932 20010629

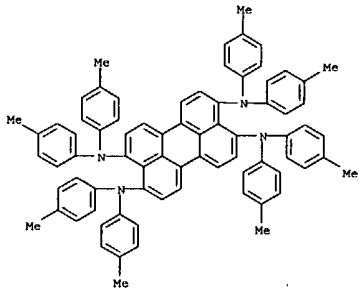
IT **252755-86-5P 252755-96-7P**
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(preparation of tetra(disubstituted amino)perylenes as red-emitting materials for organic electroluminescent displays and their intermediates)

RN 252755-86-5 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)



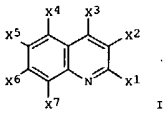
RN 252755-96-7 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octakis(4-methylphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 8 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L10 ANSWER 9 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

GI



I

AB In the devices, (A) dyes Ar[C(Rn):C(R'n)]n-Q (n ≥2) or (B) dyes I [≥1 of X1-7 = [C(Rn):C(R'n)]n-Q; R, R'= H, OH, halo, alkyl, etc.; Ar = aromatic containing N, O, S atoms; Q = (un)substituted phenyl] are added to organic layers of triphenylamine derivs. having condensed polycyclic aromatic substituents larger than naphthalene. Devices showing stable and durable emission of red light having high color purity were obtained.

ACCESSION NUMBER: 2002:636946 CAPLUS
DOCUMENT NUMBER: 137:176913
TITLE: Yellow- to red light-emitting organic electroluminescence devices
INVENTOR(S): Mori, Tomohiko; Fujikawa, Hisayoshi; Ishii, Masahiko; Takeuchi, Hisato; Taga, Yasunori
PATENT ASSIGNEE(S): Toyota Central Research and Development Laboratories, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

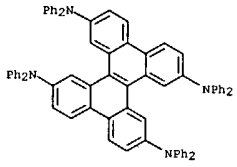
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002237384	A2	20020823	JP 2001-31256	20010207

PRIORITY APPLN. INFO.: JP 2001-31256 20010207
OTHER SOURCE(S): MARPAT 137:176913

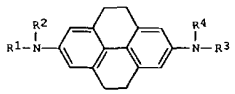
IT **267884-21-9**
RL: TEM (Technical or engineered material use); USES (Uses)
(yellow- to red light-emitting organic electroluminescence devices containing polycyclic aromatic tri-Ph amine derivs. and methine-containing dyes)

RN 267884-21-9 CAPLUS
CN Dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)

L10 ANSWER 9 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L10 ANSWER 10 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

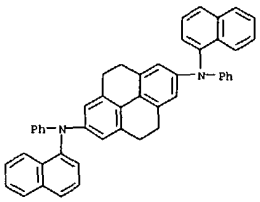
AB The invention refers to a tetrahydropyrene hole transport compound I [R1-2 = Ph, tolyl, naphthyl, biphenyl, 9,9-dimethylfluorene-2-yl, or 4,5,9,10-tetrahydropyrene; and R1,2 and/or R3,4 may be connected and contain at least one carbazoyl or iminobenzyl, and the unconnected Rn = Ph, tolyl, naphthyl, biphenyl, 9,9-dimethylfluorene-2-yl, or 4,5,9,10-tetrahydropyrene] with heat resistance properties.

ACCESSION NUMBER: 2002:538511 CAPLUS
DOCUMENT NUMBER: 137:101222
TITLE: Hole transport compound and organic thin film luminescent component
INVENTOR(S): Ito, Yuichi
PATENT ASSIGNEE(S): Toppan Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002203685	A2	20020719	JP 2000-399866	20001228

PRIORITY APPLN. INFO.: JP 2000-399866 20001228
OTHER SOURCE(S): MARPAT 137:101222
IT **403671-76-1P**
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(hole transport compound and organic thin film luminescent component)
RN 403671-76-1 CAPLUS
CN 2,7-Pyrenediamine, 4,5,9,10-tetrahydro-N,N'-di-1-naphthalenyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)

L10 ANSWER 10 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L10 ANSWER 11 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
AB Organic electroluminescent devices comprising an anode; a cathode; and ≥1 organic thin film layers including a light-emitting layer sandwiched between said anode and said cathode ADIW ≥1 organic thin film layer contains a compound including an (un)substituted cyclohexylidenemethine group.

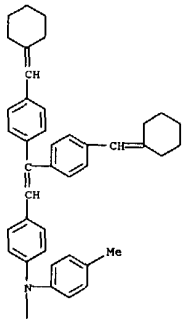
ACCESSION NUMBER: 2002:368916 CAPLUS
DOCUMENT NUMBER: 136:393041
TITLE: Organic electroluminescent devices
INVENTOR(S): Toguchi, Satoru; Ishikawa, Hitoshi; Tada, Hiroshi; Oda, Atsushi
PATENT ASSIGNEE(S): Japan
SOURCE: U.S. Pat. Appl. Publ., 87 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002058156	A1	20020516	US 2001-985657	20011105
JP 2002151263	A2	20020524	JP 2000-339603	20001107
JP 2002151264	A2	20020524	JP 2000-339604	20001107
JP 2002151265	A2	20020524	JP 2000-339605	20001107

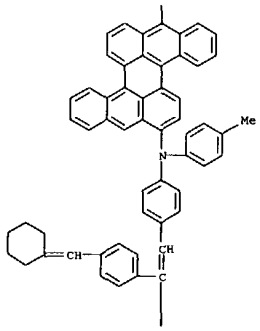
PRIORITY APPLN. INFO.: JP 2000-339603 A 20001107
JP 2000-339604 A 20001107
JP 2000-339605 A 20001107
OTHER SOURCE(S): MARPAT 136:393041
IT **426218-32-8P 426218-33-9P 426218-34-0P 426218-35-1P**
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(organic electroluminescent devices employing cyclohexylidenemethine derivs.)
RN 426218-32-8 CAPLUS
CN Dibenzo[a,j]perylene-7,16-diamine, N,N'-bis[4-[2,2-bis[4-(cyclohexylidenemethyl)phenyl]ethenyl]phenyl]-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 11 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

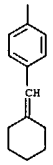
PAGE 1-A



PAGE 2-A

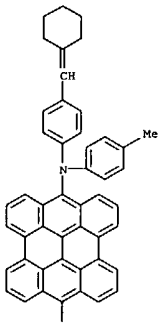


PAGE 3-A

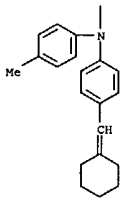


RN 426218-33-9 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N'-bis[4-(cyclohexylidenemethyl)phenyl]-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

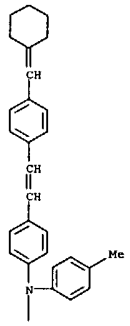


PAGE 2-A

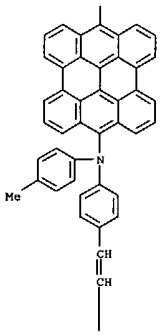


RN 426218-34-0 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N'-bis[4-[2-[4-(cyclohexylidenemethyl)phenyl]ethenyl]phenyl]-N,N'-bis(4-methylphenyl)-(9CI) (CA INDEX NAME)

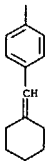
PAGE 1-A



PAGE 2-A

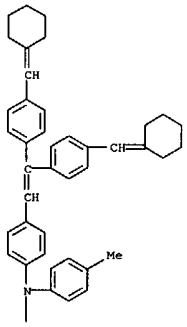


PAGE 3-A

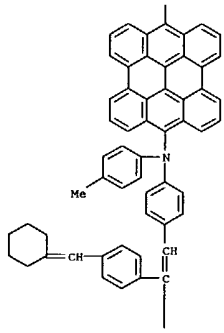


RN 426218-35-1 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N'-bis[4-[2,2-bis[4-(cyclohexylidenemethyl)phenyl]ethenyl]phenyl]-N,N'-bis(4-methylphenyl)-(9CI) (CA INDEX NAME)

PAGE 1-A

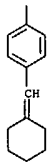


PAGE 2-A

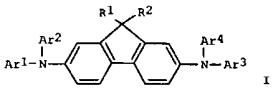


L10 ANSWER 11 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 3-A



L10 ANSWER 12 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

AB Novel arylamine compds. I, and an organic electroluminescent device whose organic compound layer contains a novel arylamine compound described above: I
(wherein R1 and R2 are each independently alkyl, alkoxy, aryl, arylalkyl, or aryloxy; and Ar1 to Ar4 may be each independently aryl or a heterocyclic group, but at least 2 of Ar1 to Ar4 must be each m-biphenyl or aryl-substituted biphenyl with the remainder being each biphenyl, provided that when the aryl-substituted biphenyl is di-aryl-substituted biphenyl, the remainder are each aryl). The invention provides organic electroluminescent devices exhibiting high luminance, high heat resistance, long lifetime and high light emitting efficiency, and novel arylamine compds. capable of realizing such electroluminescent devices.

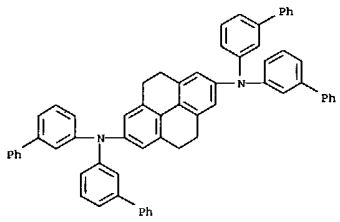
ACCESSION NUMBER: 2002:185057 CAPLUS
DOCUMENT NUMBER: 136:238791
TITLE: Novel arylamine compounds and organic electroluminescent devices
INVENTOR(S): Hosokawa, Chishio; Funahashi, Masakazu
PATENT ASSIGNEE(S): Idemitsu Kosan Co., Ltd., Japan
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020460	A1	20020314	WO 2001-JP7477	20010830
W: CN, IN, KR				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
JP 2002080433	A2	20020319	JP 2000-268833	20000905
EP 1219590	A1	20020703	EP 2001-961205	20010830
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 2002137969	A1	20020926	US 2001-945633	20010905
US 6515182	B2	20030204		
US 2003018218	A1	20030123	US 2002-193323	20020712
US 6657084	B2	20031202		
US 2004054232	A1	20040318	US 2003-658417	20030910

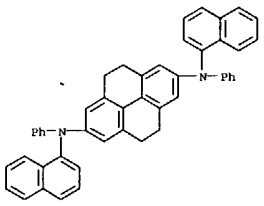
PRIORITY APPLN. INFO.: JP 2000-268833 A 20000905
WO 2001-JP7477 W 20010830
US 2001-945633 A3 20010905
US 2002-193323 A1 20020712

OTHER SOURCE(S): MARPAT 136:238791
IT **403671-75-0 403671-76-1**
RL: DEV (Device component use); USES (Uses)

L10 ANSWER 12 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(novel arylamine compds. and org. electroluminescent devices)
RN 403671-75-0 CAPLUS
CN 2,7-Pyrenediamine, N,N,N',N'-tetrakis[1,1'-biphenyl]-3-yl-4,5,9,10-tetrahydro- (9CI) (CA INDEX NAME)



RN 403671-76-1 CAPLUS
CN 2,7-Pyrenediamine, 4,5,9,10-tetrahydro-N,N'-di-1-naphthalenyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

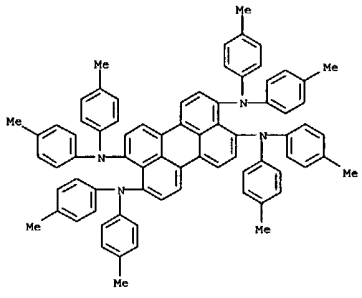
FORMAT

L10 ANSWER 13 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
AB The light-emitting material is a mixture of ≥2 perylene derivs. Organic electroluminescent device having a light-emitting layer containing the material is also claimed. The material emits yellow to red light with high luminescent efficiency and the device has high brightness and long life.

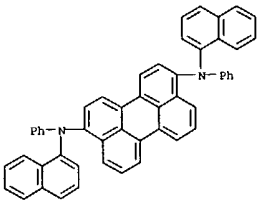
ACCESSION NUMBER: 2002:21720 CAPLUS
DOCUMENT NUMBER: 136:77054
TITLE: Perylene derivatives of light-emitting material and organic electroluminescent device using it
INVENTOR(S): Toba, Yasumasa; Onikubo, Shunichi
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 33 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002003833	A2	20020109	JP 2000-190063	20000623

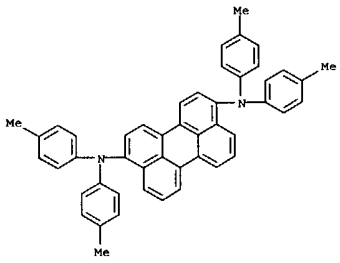
PRIORITY APPLN. INFO.: JP 2000-190063 20000623
OTHER SOURCE(S): MARPAT 136:77054
IT **252755-96-7P 252756-01-7P 252756-13-1P**
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(perylene derivs. mixture of light-emitting material with high luminescent efficiency for organic electroluminescent device)
RN 252755-96-7 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



RN 252756-01-7 CAPLUS
CN 3,10-Perylenediamine, N,N'-di-1-naphthalenyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)

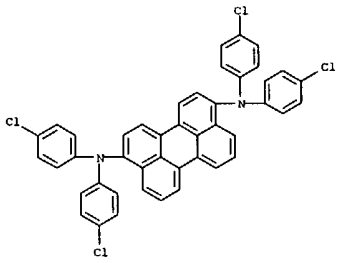


RN 252756-13-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)

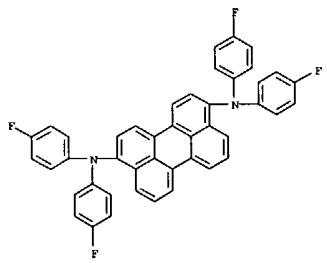


IT **384343-46-8 384343-47-9 384343-49-1**
384343-58-2 384343-65-1 384343-68-4
384343-70-8 384343-73-1 384343-75-3
384343-77-5 384343-99-1
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(perylene derivs. mixture of light-emitting material with high luminescent efficiency for organic electroluminescent device)

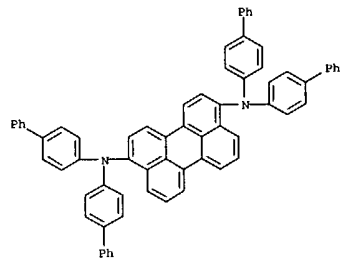
RN 384343-46-8 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis(4-chlorophenyl)- (9CI) (CA INDEX NAME)



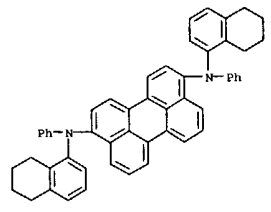
RN 384343-47-9 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis(4-fluorophenyl)- (9CI) (CA INDEX NAME)



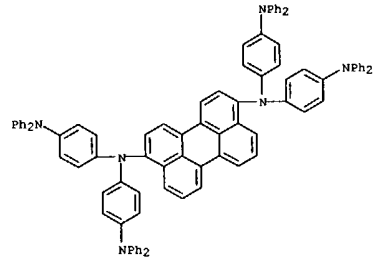
RN 384343-49-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis[1,1'-biphenyl]-4-yl- (9CI) (CA INDEX NAME)



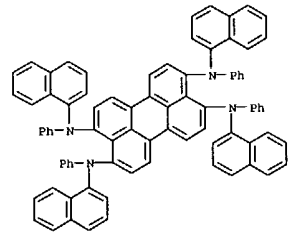
RN 384343-58-2 CAPLUS
CN 3,10-Perylenediamine, N,N'-diphenyl-N,N'-bis(5,6,7,8-tetrahydro-1-naphthalenyl)- (9CI) (CA INDEX NAME)



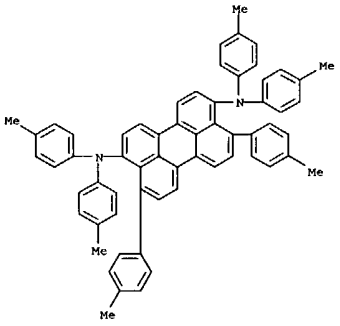
RN 384343-65-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis[4-(diphenylamino)phenyl]- (9CI) (CA INDEX NAME)



RN 384343-68-4 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N',N'',N'''-tetra-1-naphthalenyl-N,N',N'',N'''-tetraphenyl- (9CI) (CA INDEX NAME)

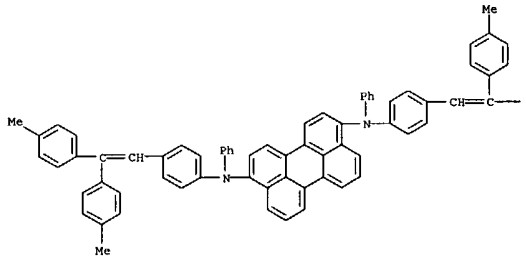


RN 384343-70-8 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N',4,9-hexakis(4-methylphenyl)- (9CI) (CA INDEX NAME)

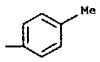


RN 384343-73-1 CAPLUS
CN 3,10-Perylenediamine, N,N'-bis[4-[2,2-bis(4-methylphenyl)ethenyl]phenyl]-N,N'-diphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

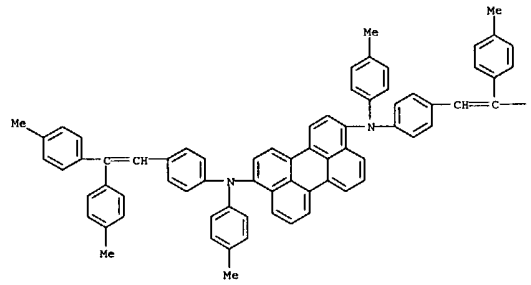


PAGE 1-B

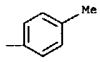


RN 384343-75-3 CAPLUS
CN 3,10-Perylenediamine, N,N'-bis[4-[2,2-bis(4-methylphenyl)ethenyl]phenyl]-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

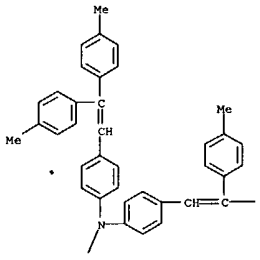


PAGE 1-B

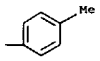


RN 384343-77-5 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis[4-[2,2-bis(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

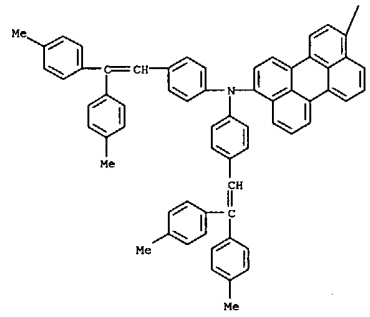
PAGE 1-A



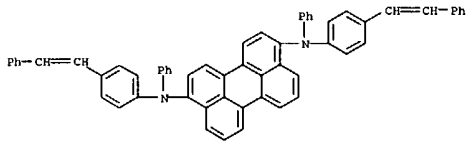
PAGE 1-B



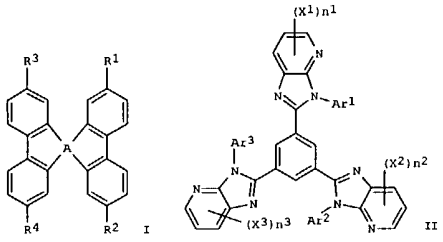
PAGE 2-A



RN 384343-99-1 CAPLUS
CN 3,10-Perylenediamine, N,N'-diphenyl-N,N'-bis[4-(2-phenylethenyl)phenyl]- (9CI) (CA INDEX NAME)



L10 ANSWER 14 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI

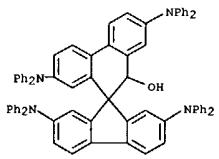


AB The invention refers to an organic electroluminescent component comprising I
[R1-4 = substituents; A = ≥ 2 C atoms, ≥ 1 carbon substituted with non-carbon atoms or form a biphenyl derivative] as a hole
transport luminescent layer, and II [Ar1-3 = aryl or aromatic heterocycle;
X1-3 = substituents; n1-3 = 0 - 3] as a electron transport layer.
ACCESSION NUMBER: 2001:847757 CAPLUS
DOCUMENT NUMBER: 135:378557
TITLE: Organic electroluminescent component
INVENTOR(S): Ishii, Masahiko; Tokito, Seiji; Noda, Hiroshi; Taga, Yasunori; Okada, Hisashi; Kimura, Makoto; Sawaki, Yasuhiko
PATENT ASSIGNEE(S): Toyota Central Research and Development Laboratories, Inc., Japan; Fuji Photo Film Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 2218 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

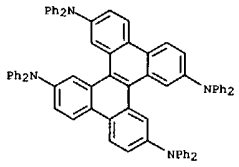
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001326079	A2	20011122	JP 2000-145774	20000517

PRIORITY APPLN. INFO.: JP 2000-145774 20000517
OTHER SOURCE(S): MARPAT 135:378557
IT **267884-21-9 267884-22-0**
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent component)
RN 267884-21-9 CAPLUS
CN Dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)

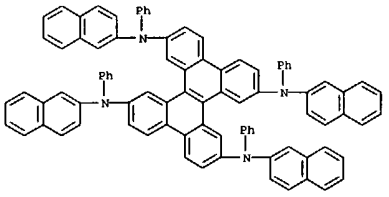
L10 ANSWER 14 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CN Spiro[9H-fluorene-9,9'(10'H)-phenanthren]-10'-ol, 2,2',7,7'-tetrakis(diphenylamino)- (9CI) (CA INDEX NAME)



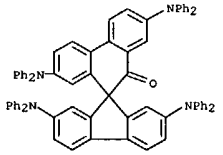
L10 ANSWER 14 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 267884-22-0 CAPLUS
CN Dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N',N'',N'''-tetra-2-naphthalenyl-N,N',N'',N'''-tetraphenyl- (9CI) (CA INDEX NAME)

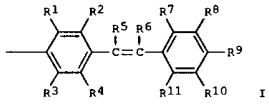


IT **261517-63-9P 267884-20-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(organic electroluminescent component)
RN 261517-63-9 CAPLUS
CN Spiro[9H-fluorene-9,9'(10'H)-phenanthren]-10'-one, 2,2',7,7'-tetrakis(diphenylamino)- (9CI) (CA INDEX NAME)



RN 267884-20-8 CAPLUS

L10 ANSWER 15 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI

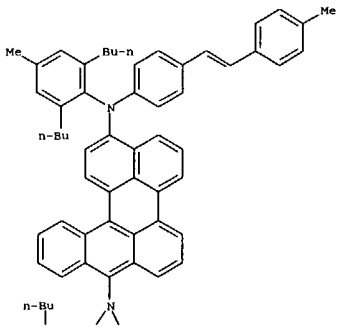


AB Organic electroluminescent devices are described which employ bis(diarylamino)arylene compds. are described by the general formula (Ar3)(Ar2)N-Ar1-N(Ar4)(Ar5) (Ar1 = C5-42 (un)substituted arylene group; ≥1 of Ar2-5 = I, with the remaining groups = C6-20 aryl groups, with ≥1 of Ar2-5 comprising ≥1 hudrocarbon group that may include O atoms; Ar2 and Ar3 or Ar4 and Ar5 may bond to form a ring;
R1-11
= H, halo, OH, (un)substituted amino, cyano, nitro, (un)substituted alkyl,
(un)substituted alkenyl, (un)substituted cycloalkyl, (un)substituted alkoxy, (un)substituted aromatic hydrocarbon, (un)substituted aromatic heterocyclic, (un)substituted aralkyl, (un)substituted aryloxy, (un)substituted alkoxycarbonyl, or carbonyl; and two of R1-11 may bond to form a ring).
ACCESSION NUMBER: 2001:582282 CAPLUS
DOCUMENT NUMBER: 135:160005
TITLE: Organic electroluminescent device
INVENTOR(S): Ishikawa, Hitoshi; Toguchi, Satoru; Tada, Hiroshi; Morioka, Yukiko; Oda, Atsushi
PATENT ASSIGNEE(S): Japan
SOURCE: U.S. Pat. Appl. Publ., 40 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

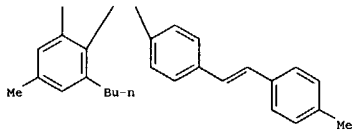
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001012571	A1	20010809	US 2000-729195	20001205
JP 2001237076	A2	20010831	JP 2000-343560	20001110
JP 2001237077	A2	20010831	JP 2000-343561	20001110

PRIORITY APPLN. INFO.: JP 1999-356685 A 19991215
JP 1999-356686 A 19991215
JP 2000-343560 A 20001110
JP 2000-343561 A 20001110
OTHER SOURCE(S): MARPAT 135:160005
IT **353252-29-6 353252-30-9 353252-43-4 353256-62-9**
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices employing bis(diarylamino)arylene derivs.)
RN 353252-29-6 CAPLUS
CN Benzo[a]perylene-7,14-diamine, N,N'-bis(2,6-dibutyl-4-methylphenyl)-N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

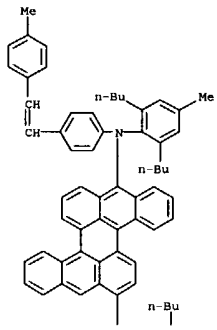


PAGE 2-A

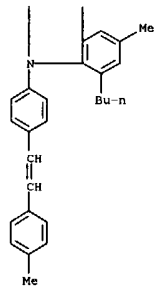


RN 353252-30-9 CAPLUS
CN Dibenzo[a,j]perylene-7,16-diamine, N,N'-bis(2,6-dibutyl-4-methylphenyl)-N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

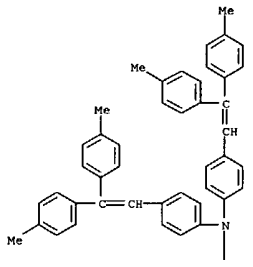


PAGE 2-A

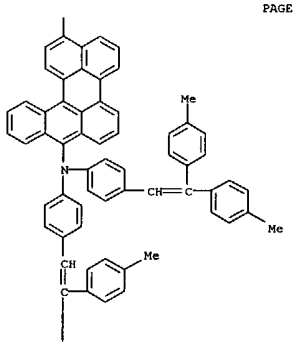


RN 353252-43-4 CAPLUS
CN Benzo[a]perylene-7,14-diamine, N,N,N',N'-tetrakis[4-[2,2-bis(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

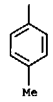
PAGE 1-A



PAGE 2-A

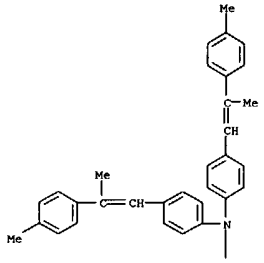


PAGE 3-A



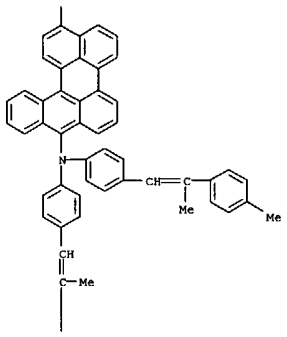
RN 353256-62-9 CAPLUS
CN Benzo[a]perylene-7,14-diamine, N,N,N',N'-tetrakis[4-[2-(4-methylphenyl)-1-propenyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

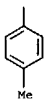


L10 ANSWER 15 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 2-A



PAGE 3-A



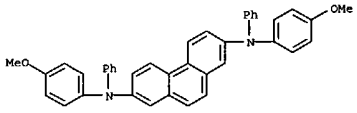
L10 ANSWER 16 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The authors have developed a mol. engineering strategy around the diaminobiphenyl 1 to design efficient nonlinear absorbers for optical limiting application in the visible range. Based on a photophysics engineering strategy, a significant improvement of efficiency is obtained by influencing the excited state dynamics. The role of the planarity of the conjugated system was also studied.

ACCESSION NUMBER: 2001:425204 CAPLUS
DOCUMENT NUMBER: 135:202484
TITLE: Molecular engineering around diaminobiphenyls for optical limiting at visible wavelengths
AUTHOR(S): Anemian, R.; Andraud, C.; Collet, A.; Nunzi, J.-M.; Morel, Y.; Baldeck, P. L.
CORPORATE SOURCE: Ec. Norm. Super Lyon, Lab. Stereochim. Interactions Mol., UMR 5532, Lyon, 69364/07, Fr.
SOURCE: MCLC S&T, Section B: Nonlinear Optics (2000), 25(1-4), 145-151
CODEN: MCLOEB; ISSN: 1058-7268
PUBLISHER: Gordon & Breach Science Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

IT **357291-35-1**
RL: DEV (Device component use); USES (Uses)
(mol. engineering around diaminobiphenyls for optical limiting at visible wavelengths)

RN 357291-35-1 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis(4-methoxyphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

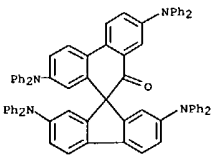
L10 ANSWER 17 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The authors have fabricated highly efficient organic light-emitting diodes (OLEDs) using novel hole-transporting emissive materials with triphenylamine moiety. The novel emissive materials have a high glass transition temperature ranging from 141-152°, which is attributed to nonplanar mol. structure. The OLEDs consist of an emitting layer of the novel emissive material and an electron-transport layer of tris(8-quinolinato) Al (Alq3). Emission colors of the OLEDs were bluish-green and greenish-yellow. High external quantum efficiency of 1.2-2% was obtained at a luminance of 300 cd/m2, and good durability in a continuous operation at room temperature and high temps. was achieved.

ACCESSION NUMBER: 2001:400149 CAPLUS
DOCUMENT NUMBER: 135:187365
TITLE: Electroluminescence in novel hole-transporting emissive materials
AUTHOR(S): Tokito, Shizuo; Noda, Koji; Fujikawa, Hisayoshi; Kimura, Makoto; Shimada, Kou; Sawaki, Yasuhiko; Taga, Yasunori
CORPORATE SOURCE: TOYOTA Central Research & Development Laboratories, INC., Nagakute, Aichi, 480-1192, Japan
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (2001), 4105(Organic Light-Emitting Materials and Devices IV), 316-321
CODEN: PSISDG; ISSN: 0277-786X
PUBLISHER: SPIE-The International Society for Optical Engineering
DOCUMENT TYPE: Journal
LANGUAGE: English

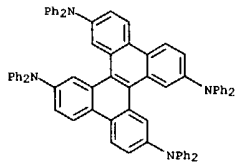
IT **261517-63-9 267884-21-9 267884-22-0**
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(properties and electroluminescence and applications of novel hole-transporting emissive materials)

RN 261517-63-9 CAPLUS
CN Spiro[9H-fluorene-9,9'(10'H)-phenanthren]-10'-one, 2,2',7,7'-tetrakis(diphenylamino)- (9CI) (CA INDEX NAME)

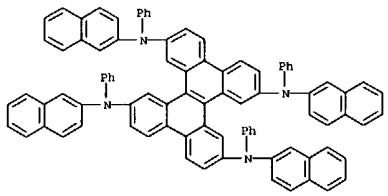


RN 267884-21-9 CAPLUS
CN Dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)

L10 ANSWER 17 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 267884-22-0 CAPLUS
CN Dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N',N'',N'''-tetra-2-naphthalenyl-N,N',N'',N'''-tetraphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

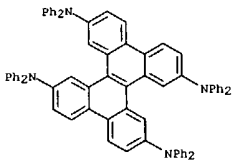
L10 ANSWER 18 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The authors have fabricated highly efficient organic light-emitting diodes (OLEDs) using new hole-transporting emissive materials based on dibenzochrysene. Hole drift mobilities of the dibenzochrysene derivs. were measured in the vacuum-deposited films and are 5 + 10-4-2 + 10-3 cm2/V s (at 5 + 105 V/cm). The OLEDs consist of an emitting layer of the dibenzochrysene derivative and an electron-transport layer of tris(8-quinolinolato)aluminum. Emission colors of the OLEDs were blue-green and their spectra were consistent with the luminescence with a peak wavelength of 490 nm. High external quantum efficiency of 2% was obtained at a luminance of 300 cd/m2, and good durability in a continuous operation at room temperature and high temps. was achieved.

ACCESSION NUMBER: 2000:449037 CAPLUS
DOCUMENT NUMBER: 133:157042
TITLE: Highly efficient blue-green emission from organic light-emitting diodes using dibenzochrysene derivatives
AUTHOR(S): Tokito, Shizuo; Noda, Koji; Fujikawa, Hisayoshi; Taga, Yasunori; Kimura, Makoto; Shimada, Kou; Sawaki, Yasuhiko
CORPORATE SOURCE: TOYOTA Central Research & Development Laboratories, Inc., Nagakute, Aichi, 480-1192, Japan
SOURCE: Applied Physics Letters (2000), 77(2), 160-162
CODEN: APPLAB; ISSN: 0003-6951
PUBLISHER: American Institute of Physics
DOCUMENT TYPE: Journal
LANGUAGE: English

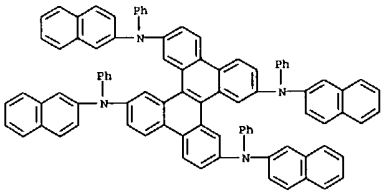
IT **267884-21-9 267884-22-0**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(highly efficient blue-green emission from organic LEDs using aluminum tris(quinolinolato) complex and)

RN 267884-21-9 CAPLUS
CN Dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)



RN 267884-22-0 CAPLUS
CN Dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N',N'',N'''-tetra-2-naphthalenyl-N,N',N'',N'''-tetraphenyl- (9CI) (CA INDEX NAME)

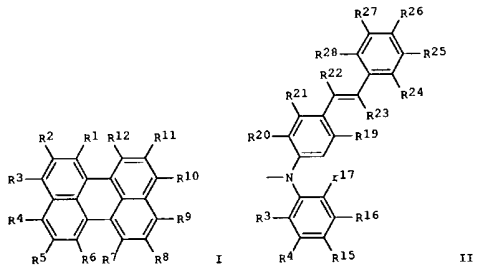
L10 ANSWER 18 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 19 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

GI



I II

AB The devices comprise a phosphor, an electron transport and/or a hole transport layer comprising a perylene derivative I, II (R1-12 = H, halo, hydroxyl, (substituted) amino, nitro, cyano, (substituted) alkyl, (substituted) alkenyl, (substituted) cycloalkyl, (substituted) alkoxy, (substituted) aromatic hydrocarbon, (substituted) aromatic heterocyclic, (substituted) aralkyl, (substituted) aryloxy; R13-23 = H, halo, hydroxyl, (substituted) amino excluding diarylamino, nitro, cyano, (substituted) alkyl, (substituted) alkenyl, (substituted) alkoxy, (substituted) aromatic hydrocarbon, (substituted) aromatic heterocyclic, (substituted) aralkyl, (substituted) aryloxy, (substituted) alkoxycarbonyl, (substituted) styryl, carboxyl; R24-28 = H, halo, hydroxyl, NAr1Ar2; Ar1,2 = C6-20 (substituted) aryl; nitro, cyano, (substituted) alkyl, (substituted) alkenyl, (substituted) cycloalkyl, (substituted) alkoxy, (substituted) aromatic hydrocarbon, (substituted) aromatic heterocyclic, (substituted) aralkyl, (substituted) aryloxy, (substituted) alkoxycarbonyl, carboxyl).

ACCESSION NUMBER: 2000:440436 CAPLUS
DOCUMENT NUMBER: 133:81379
TITLE: Organic electroluminescent devices
INVENTOR(S): Touguchi, Itaru; Ishikawa, Hitoshi; Morioka, Yukiko; Oda, Atsushi
PATENT ASSIGNEE(S): Nec Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000182771	A2	20000630	JP 1998-357822	19981216
JP 3285085	B2	20020527		
US 2003134145	A1	20030717	US 1999-459877	19991214
KR 2000048192	A	20000725	KR 1999-58442	19991216
PRIORITY APPLN. INFO.:			JP 1998-357822	A 19981216
			JP 1999-7051	A 19990113

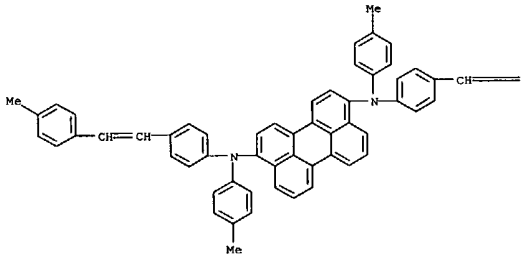
OTHER SOURCE(S): MARPAT 133:81379

L10 ANSWER 19 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

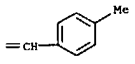
IT **265120-90-9**
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices containing perylene derivative)

RN 265120-90-9 CAPLUS
CN 3,10-Perylenediamine, N,N'-bis(4-methylphenyl)-N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L10 ANSWER 20 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The device comprises a multicolored light-emitting layer and either or both of hole- and electron-injection layer(s) sandwiched in between a pair of electrodes. The light-emitting layer comprises multiple light-emitting regions having different colors and the hole- or the electro-injection layer is formed entirely on the light-emitting layer. Preferable compds. for each of the layers are given. Devices showing constant emission of each color are obtained.

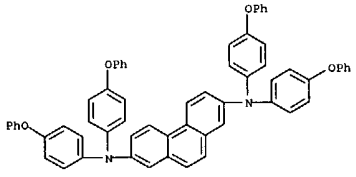
ACCESSION NUMBER: 2000:363829 CAPLUS
DOCUMENT NUMBER: 133:24764
TITLE: Organic electroluminescent display devices with high luminance and efficient light emission
INVENTOR(S): Onikubo, Shunichi; Tamano, Michiko
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000150152	A2	20000530	JP 1998-324629	19981116

PRIORITY APPLN. INFO.: JP 1998-324629 19981116

IT **271777-32-3**
RL: DEV (Device component use); USES (Uses)
(blue light-emitting; electroluminescent display devices with high luminance and uniform emission of each colors)

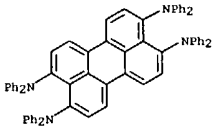
RN 271777-32-3 CAPLUS
CN 2,7-Phenanthrenediamine, N,N,N',N'-tetrakis(4-phenoxyphenyl)- (9CI) (CA INDEX NAME)



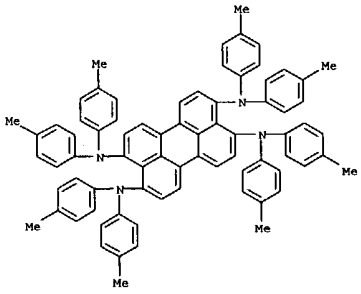
IT **252755-86-5 252755-96-7**
RL: DEV (Device component use); USES (Uses)
(red light-emitting; electroluminescent display devices with high luminance and uniform emission of each colors)

RN 252755-86-5 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)

L10 ANSWER 20 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 252755-96-7 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 21 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The display device is an assembly of organic electroluminescent devices containing an aromatic tertiary amine as a light-emitting material. The device shows high emission and long service life.

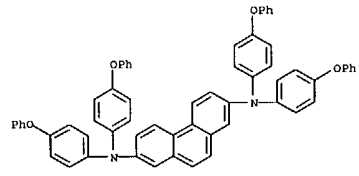
ACCESSION NUMBER: 2000:362825 CAPLUS
DOCUMENT NUMBER: 133:24760
TITLE: Organic color electroluminescent display device
INVENTOR(S): Onikubo, Shunichi; Tamano, Michiko
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000150161	A2	20000530	JP 1998-324628	19981116

PRIORITY APPLN. INFO.: JP 1998-324628 19981116

IT **271777-32-3**
RL: DEV (Device component use); USES (Uses)
(blue-emitting layer; organic color electroluminescent display device containing tertiary amines)

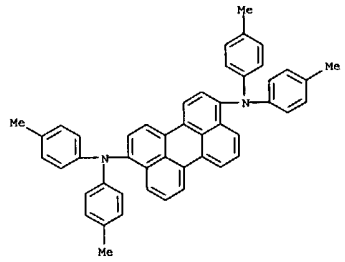
RN 271777-32-3 CAPLUS
CN 2,7-Phenanthrenediamine, N,N,N',N'-tetrakis(4-phenoxyphenyl)- (9CI) (CA INDEX NAME)



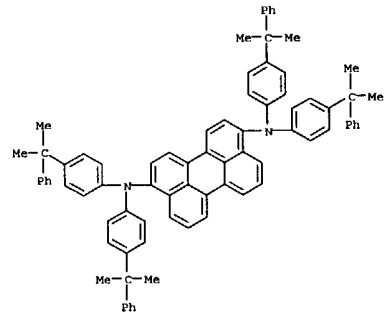
IT **252756-13-1 271778-32-6**
RL: DEV (Device component use); USES (Uses)
(orange-emitting layer; organic color electroluminescent display device containing tertiary amines)

RN 252756-13-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 21 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



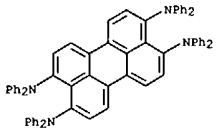
RN 271778-32-6 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis[4-(1-methyl-1-phenylethyl)phenyl]- (9CI) (CA INDEX NAME)



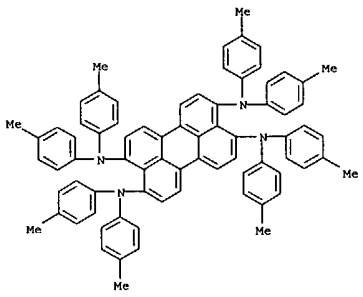
IT **252755-86-5 252755-96-7**
RL: DEV (Device component use); USES (Uses)
(red-emitting layer; organic color electroluminescent display device containing tertiary amines)

RN 252755-86-5 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)

L10 ANSWER 21 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 252755-96-7 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 22 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

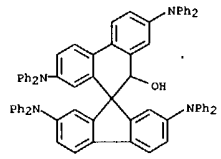
AB An organic EL element comprising an anode, a cathode, and ≥1 organic compound layers sandwiched between the anode and the cathode, wherein one of the organic compound layers comprises an organic compound represented by chemical formula I (A = C>1 group; R1-4 = diphenylamino, oxadiazol, triazol, etc.) specifically any of the chemical formulas II (R1-4 = H, alkyl, Ph,etc.), III (R1-4 = H, alkyl, alkoxy, etc.; R5-16 = substituent), IV (R1-4 = H, alkyl, alkoxy, etc.; R5-16 = substituent) and V (R1-4 = H, alkyl, alkoxy, etc.; R5-16 = substituent). By incorporating desired substituents as R1 to R4, the compound can be made to have one or more of a hole-transporting function, luminescent function, and electron-transporting function. Since the mol. is apt to be nonplanner because of its structure, the compound is less apt to crystallize and has a high oxide glass transition temperature Therefore, when used in an organic EL element, the compound contributes to an improvement in element life.

ACCESSION NUMBER: 2000:335497 CAPLUS
DOCUMENT NUMBER: 132:341271
TITLE: Organic electroluminescent device
INVENTOR(S): Tokito, Shizuo; Noda, Koji; Fujikawa, Hisayoshi; Ishii, Masahiko; Taga, Yasunori; Kimura, Makoto; Sawaki, Yasuhiko
PATENT ASSIGNEE(S): Kabushiki Kaisha Toyota Chuo Kenkyusho, Japan
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

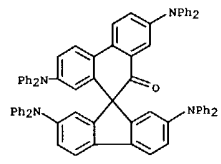
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000027946	A1	20000518	WO 1999-JP6290	19991111
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6416887	B1	20020709	US 2000-581544	20000711

PRIORITY APPLN. INFO.: JP 1998-321080 A 19981111
JP 1999-65683 A 19990311
WO 1999-JP6290 W 19991111
OTHER SOURCE(S): MARPAT 132:341271
IT **267884-20-8P**
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(organic electroluminescent element)
RN 267884-20-8 CAPLUS

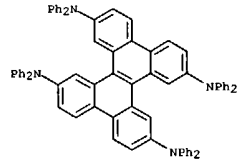
L10 ANSWER 22 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CN Spiro[9H-fluorene-9,9'(10'H)-phenanthren]-10'-ol, 2,2',7,7'-tetrakis(diphenylamino)- (9CI) (CA INDEX NAME)



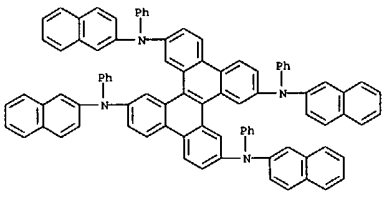
IT **261517-63-9P 267884-21-9P 267884-22-0P 267884-23-1P**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic electroluminescent element)
RN 261517-63-9 CAPLUS
CN Spiro[9H-fluorene-9,9'(10'H)-phenanthren]-10'-one, 2,2',7,7'-tetrakis(diphenylamino)- (9CI) (CA INDEX NAME)



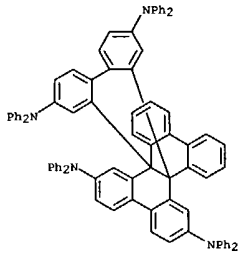
RN 267884-21-9 CAPLUS
CN Dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 22 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RN 267884-22-0 CAPLUS
CN Dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N',N'',N'''-tetra-2-naphthalenyl-N,N',N'',N'''-tetraphenyl- (9CI) (CA INDEX NAME)

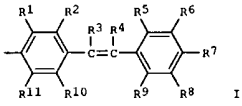


RN 267884-23-1 CAPLUS
CN 8b,16b-([1,2]Benzeno[1,2]benzeno)dibenzo[g,p]chrysene-2,7,10,15-tetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 23 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



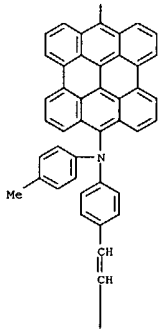
I

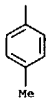
AB Organic electroluminescent device comprising at least an anode, an organic
light-emitting zone which consists of ≥1 organic thin-film layers, and a cathode are described in which the organic light-emitting zone is adjacent
to the anode, and a layer contacting the anode in the light-emitting zone contains, either singly or as a mixture, a compound represented by the general
formula Ar2-N(Ar3)-Ar1-N(Ar4)-Ar5 (Ar1 = an (un)substituted arylene group 5-42 carbons, Ar2-5 = independently selected (un)substituted C6-20 aryl groups; ≥1 of Ar2-5 = styrylphenyl represented by the general formula I; and R1-11 = independently selected H, halo, (un)substituted amino (excluding diarylamino), OH, cyano, nitro, C1-6 alkyl, C1-6 alkoxy group, (un)substituted C6-18 aryl, and (un)substituted C6-18 aryloxy groups).

ACCESSION NUMBER: 2000:277799 CAPLUS
DOCUMENT NUMBER: 132:315621
TITLE: Organic electroluminescent device using hole-injectable, light-emitting material
INVENTOR(S): Oda, Atsushi; Ishikawa, Hitoshi; Toguchi, Satoru; Morioka, Yukiko
PATENT ASSIGNEE(S): NEC Corporation, Japan
SOURCE: Eur. Pat. Appl., 28 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 996177	A2	20000426	EP 1999-121184	19991022
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000133455	A2	20000512	JP 1998-302547	19981023
US 2002160225	A1	20021031	US 1999-425052	19991022
US 6670051	B2	20031230		
KR 2000029273	A	20000525	KR 1999-46178	19991023

PRIORITY APPLN. INFO.: JP 1998-302547 A 19981023
OTHER SOURCE(S): MARPAT 132:315621
IT **227010-25-5 264126-81-0 265120-86-3 265120-90-9 265120-91-0 265120-92-1 265120-93-2 265120-94-3 265120-95-4 265120-96-5**
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices using styrylamino group-containing

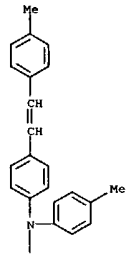


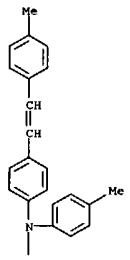


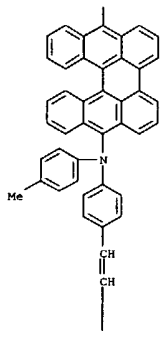
RN 264126-81-0 CAPLUS
CN Dibenzo[a,o]perylene-7,16-diamine, N,N'-bis(4-methylphenyl)-N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

diarylaminoaryleneS)

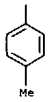
RN 227010-25-5 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N'-bis(4-methylphenyl)-N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)





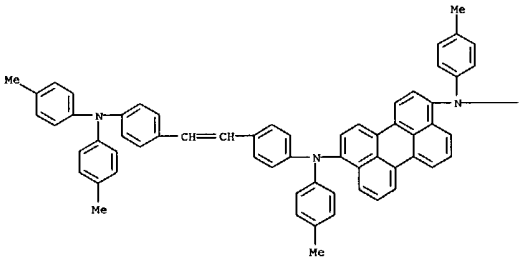


PAGE 3-A

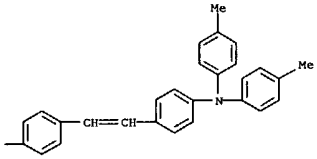


RN 265120-86-3 CAPLUS
CN 3,10-Perylenediamine, N,N'-bis[4-[2-[4-[bis(4-methylphenyl)amino]phenyl]ethenyl]phenyl]-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

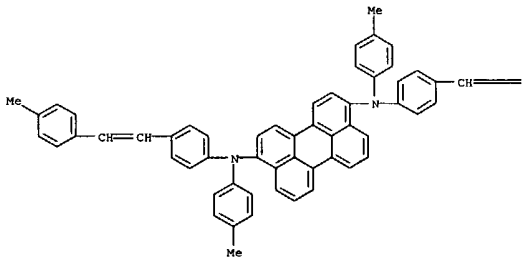


PAGE 1-B

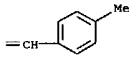


RN 265120-90-9 CAPLUS
CN 3,10-Perylenediamine, N,N'-bis(4-methylphenyl)-N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

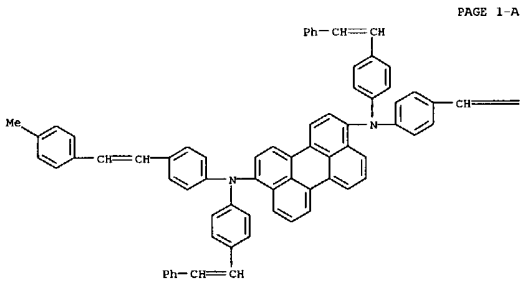


PAGE 1-B

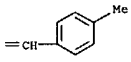


RN 265120-91-0 CAPLUS
CN 3,10-Perylenediamine, N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]-N,N'-bis[4-(2-phenylethenyl)phenyl]- (9CI) (CA INDEX NAME)

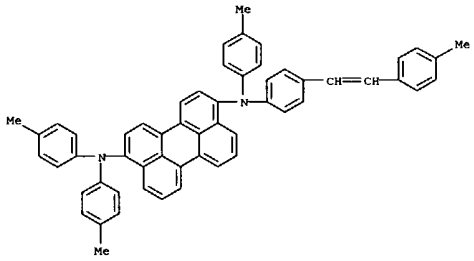
PAGE 1-A



PAGE 1-B

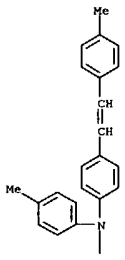


RN 265120-92-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N'-tris(4-methylphenyl)-N'-[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)



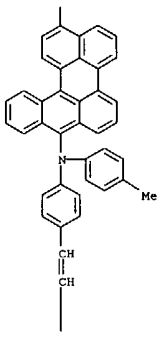
RN 265120-93-2 CAPLUS
CN Benzo[a]perylene-7,14-diamine, N,N'-bis(4-methylphenyl)-N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

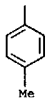


L10 ANSWER 23 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 2-A



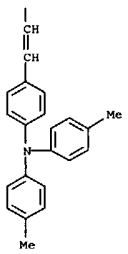
PAGE 3-A



RN 265120-94-3 CAPLUS
CN Benzo[a]perylene-7,14-diamine, N,N'-bis[4-[2-[4-[bis(4-methylphenyl)amino]phenyl]ethenyl]phenyl]-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

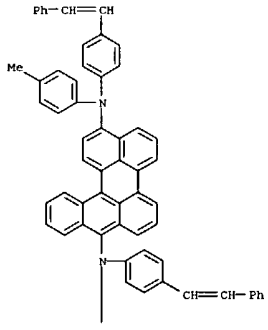
L10 ANSWER 23 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 3-A



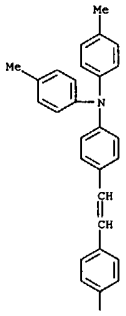
RN 265120-95-4 CAPLUS
CN Benzo[a]perylene-7,14-diamine, N14-(4-methylphenyl)-N7,N7,N14-tris[4-(2-phenylethenyl)phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

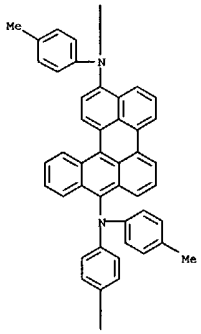


L10 ANSWER 23 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A

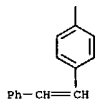


PAGE 2-A



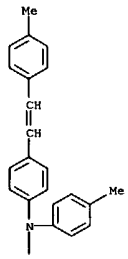
L10 ANSWER 23 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 2-A



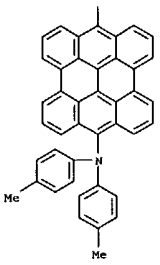
RN 265120-96-5 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N,N'-tris(4-methylphenyl)-N'-[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

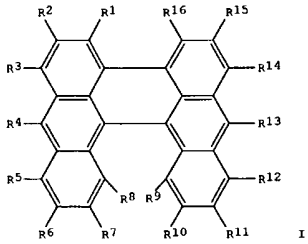


L10 ANSWER 23 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 2-A



L10 ANSWER 24 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

AB An organic electroluminescent device comprises dibenzoperylene represented by
I [R1-16 = H, halo, OH, etc. and may be combined to form a ring].

ACCESSION NUMBER: 2000:254785 CAPLUS
DOCUMENT NUMBER: 132:286140
TITLE: Organic electroluminescent device
INVENTOR(S): Higashiguchi, Itaru; Ishikawa, Hitoshi; Morioka, Yukiko; Oda, Atsushi
PATENT ASSIGNEE(S): NEC Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000113984	A2	20000421	JP 1998-282828	19981005
JP 3156679	B2	20010416		
US 6465116	B1	20021015	US 1999-327509	19990608
US 6699594	B1	20040302	US 2000-675166	20000929

PRIORITY APPLN. INFO.:
JP 1998-158938 A 19980608
JP 1998-218905 A 19980803
JP 1998-282828 A 19981005
US 1999-327509 A3 19990608

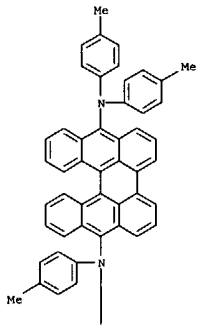
OTHER SOURCE(S): MARPAT 132:286140

IT **264126-78-5 264126-79-6 264126-81-0**
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device)

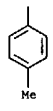
RN 264126-78-5 CAPLUS
CN Dibenzo[a,o]perylene-7,16-diamine, N,N,N',N'-tetrakis(4-methylphenyl)-(9CI) (CA INDEX NAME)

L10 ANSWER 24 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



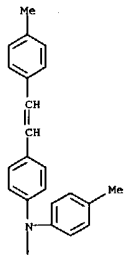
PAGE 2-A



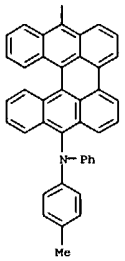
RN 264126-79-6 CAPLUS
CN Dibenzo[a,o]perylene-7,16-diamine, N,N'-bis(4-methylphenyl)-N-[4-[2-(4-methylphenyl)ethenyl]phenyl]-N'-phenyl- (9CI) (CA INDEX NAME)

L10 ANSWER 24 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A

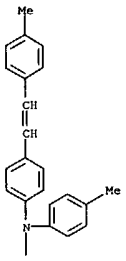


PAGE 2-A

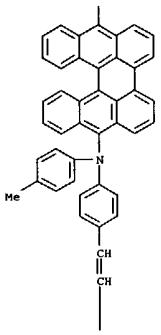


RN 264126-81-0 CAPLUS
CN Dibenzo[a,o]perylene-7,16-diamine, N,N'-bis(4-methylphenyl)-N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

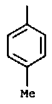
PAGE 1-A



PAGE 2-A



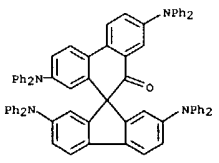
PAGE 3-A



L10 ANSWER 25 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The authors have studied the influence of hole transporting material on the electroluminescence characteristics in two-layer devices based on tris(8-quinolinolato) Al. Five hole transporting materials including two novel materials were used. No difference in turn-on voltages for light emission was seen in the devices fabricated on In-Sn-oxide treated by Ar/O plasma, and a high luminance of 10000 cd/m2 was achieved at an operating voltage around 10 V However, the photometric efficiency depended on the hole transporting material. High photometric efficiency of 6.1 cd/A and high luminous efficiency of 3.6 lm/W at a luminance of 300 cd/m2 were obtained in one of the devices.

ACCESSION NUMBER: 2000:126914 CAPLUS
DOCUMENT NUMBER: 132:285725
TITLE: Influence of hole transporting material on device performance in organic light-emitting diode
AUTHOR(S): Tokito, S.; Noda, K.; Shimada, K.; Inoue, S.-i.; Kimura, M.; Sawaki, Y.; Taga, Y.
CORPORATE SOURCE: TOYOTA Central Research & Development Labs., Inc., Nagakute-cho, Aichi, Japan
SOURCE: Thin Solid Films (2000), 363(1,2), 290-293
CODEN: THSFAP; ISSN: 0040-6090
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **261517-63-9**
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(influence of hole transporting material on device performance in organic light-emitting diode)
RN 261517-63-9 CAPLUS
CN Spiro[9H-fluorene-9,9'(10'H)-phenanthren]-10'-one, 2,2',7,7'-tetrakis(diphenylamino)- (9CI) (CA INDEX NAME)

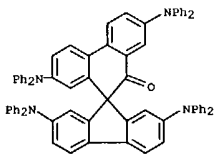


REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 26 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

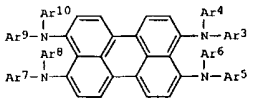
AB For multi-color organic electroluminescent (EL) devices, new triphenylamine compds. attached to a spirocyclic framework were prepared from 2,7-bis(diphenylamino)-9-fluorenone. These amines showed exceedingly high TG's or thermal stability as well as good electrochem. properties and sufficient EL characteristics, allowing practical application.

ACCESSION NUMBER: 2000:108507 CAPLUS
DOCUMENT NUMBER: 132:229211
TITLE: Spirocycle-incorporated triphenylamine derivatives as an advanced organic electroluminescent material
AUTHOR(S): Kimura, Makoto; Inoue, Shin-Ichiro; Shimada, Kou; Tokito, Shizuo; Noda, Koji; Taga, Yasunori; Sawaki, Yasuhiko
CORPORATE SOURCE: Department of Applied Chemistry, Graduate School of Engineering, Nagoya University, Nagoya, 464-8603, Japan
SOURCE: Chemistry Letters (2000), (2), 192-193
CODEN: CMLTAG; ISSN: 0366-7022
PUBLISHER: Chemical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
IT **261517-63-9P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(spirocycle-incorporated triphenylamine derivs. as advanced organic electroluminescent material)
RN 261517-63-9 CAPLUS
CN Spiro[9H-fluorene-9,9'(10'H)-phenanthren]-10'-one, 2,2',7,7'-tetrakis(diphenylamino)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 27 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

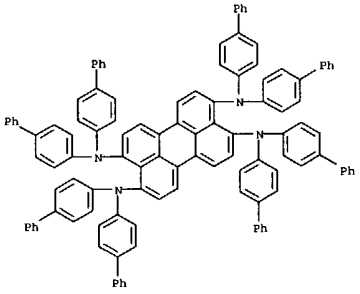
AB Compds. suitable for use in organic electroluminescent devices are described
by the general formula I (Ar3-10 = independently selected (un)substituted aromatic monocyclic group, (un)substituted fused polycyclic group, or (un)substituted aromatic heterocyclic groups; Ar3 and Ar4 and/or Ar5 and Ar6
and/or Ar7 and Ar8 and/or Ar9 and Ar10, together with the nitrogen atom to
which they are attached, may form a fused or non-fused, aromatic or non-aromatic
heterocyclic ring). The compds. may be incorporated in host materials, and other perylene derivs. may also be incorporated with them. Organic electroluminescent devices, especially red-emitting devices, in which the light-emitting layers incorporate the compds. are also described. The devices may also incorporate compds. of gallium with hydroquinone derivative
ligands.

ACCESSION NUMBER: 1999:810962 CAPLUS
DOCUMENT NUMBER: 132:56887
TITLE: Compound for organic electroluminescence device and organic electroluminescence device
INVENTOR(S): Tamano, Michiko; Maki, Shinichiro
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 40 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

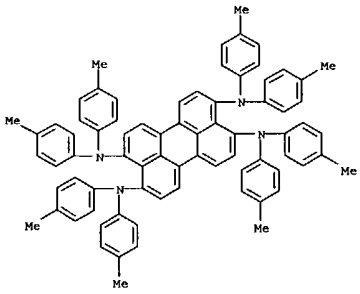
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 965629	A1	19991222	EP 1999-304641	19990615
EP 965629	B1	20030115		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001011031	A2	20010116	JP 1999-158859	19990607
US 6329084	B1	20011211	US 1999-332913	19990615

PRIORITY APPLN. INFO.: JP 1998-166459 A 19980615
JP 1999-117451 A 19990426
OTHER SOURCE(S): MARPAT 132:56887
IT **252755-77-4 252755-86-5 252755-94-5**
RL: DEV (Device component use); USES (Uses)
(perylene derivs. for organic electroluminescent devices and the devices)
RN 252755-77-4 CAPLUS

L10 ANSWER 27 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

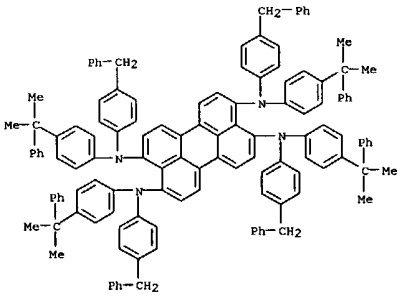


IT **252755-96-7P 252756-01-7P 252756-13-1P**
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(perylene derivs. for organic electroluminescent devices and the devices)
RN 252755-96-7 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octakis(4-methylphenyl)- (9CI) (CA INDEX NAME)

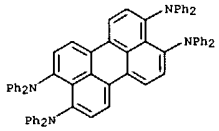


RN 252756-01-7 CAPLUS
CN 3,10-Perylenediamine, N,N'-di-1-naphthalenyl-N,N'-diphenyl- (9CI) (CA

L10 ANSWER 27 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
CN 3,4,9,10-Perylenetetramine, N,N',N'',N'''-tetrakis[4-(1-methyl-1-phenylethyl)phenyl]-N,N',N'',N'''-tetrakis[4-(phenylmethyl)phenyl]- (9CI) (CA INDEX NAME)

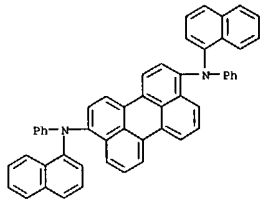


RN 252755-86-5 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octaphenyl- (9CI) (CA INDEX NAME)

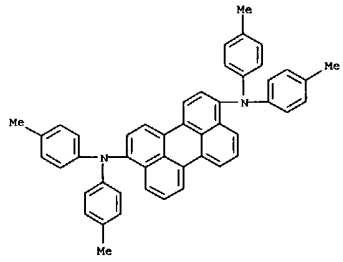


RN 252755-94-5 CAPLUS
CN 3,4,9,10-Perylenetetramine, N,N,N',N',N'',N'',N''',N'''-octakis[1,1'-biphenyl]-4-yl- (9CI) (CA INDEX NAME)

L10 ANSWER 27 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
INDEX NAME)



RN 252756-13-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX
NAME)

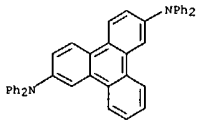


REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

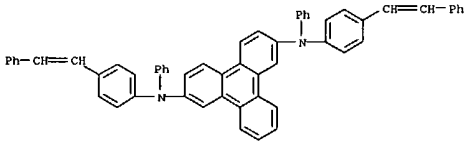
L10 ANSWER 28 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
AB An organic electroluminescent device comprises triphenylene derivs.
ACCESSION NUMBER: 1999:588084 CAPLUS
DOCUMENT NUMBER: 131:235544
TITLE: Organic electroluminescent device
INVENTOR(S): Ishikawa, Hitoshi; Higashiguchi, Itaru; Morioka, Yukiko; Oda, Atsushi
PATENT ASSIGNEE(S): NEC Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11251063	A2	19990917	JP 1998-369886	19981225
JP 3424812	B2	20030707		
US 2002064679	A1	20020530	US 1998-220622	19981224
US 6492041	B2	20021210		

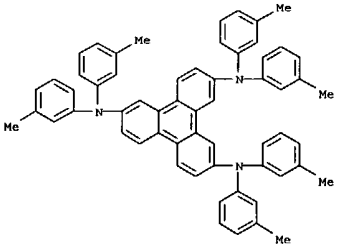
PRIORITY APPLN. INFO.: JP 1997-357023 A 19971225
OTHER SOURCE(S): MARPAT 131:235544
IT **243847-58-7 243847-59-8 243847-60-1 243847-61-2 243847-62-3 243847-63-4 243847-64-5**
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device)
RN 243847-58-7 CAPLUS
CN 2,7-Triphenylenediamine, N,N,N',N'-tetraphenyl- (9CI) (CA INDEX NAME)



RN 243847-59-8 CAPLUS
CN 2,7-Triphenylenediamine, N,N'-diphenyl-N,N'-bis[4-(2-phenylethenyl)phenyl]- (9CI) (CA INDEX NAME)

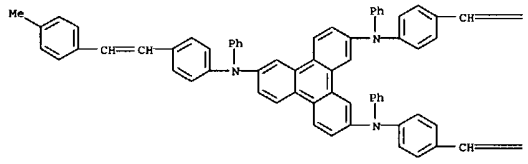


L10 ANSWER 28 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



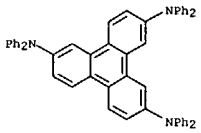
RN 243847-63-4 CAPLUS
CN 2,6,11-Triphenylenetriamine, N,N',N''-tris[4-[2-(4-methylphenyl)ethenyl]phenyl]-N,N',N''-triphenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

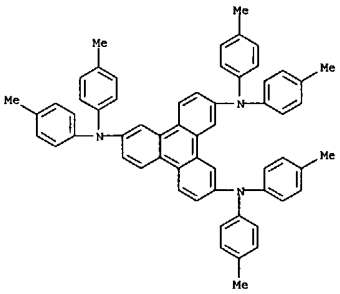


L10 ANSWER 28 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

RN 243847-60-1 CAPLUS
CN 2,6,11-Triphenylenetriamine, N,N,N',N',N'',N''-hexaphenyl- (9CI) (CA INDEX NAME)



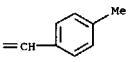
RN 243847-61-2 CAPLUS
CN 2,6,11-Triphenylenetriamine, N,N,N',N',N'',N''-hexakis(4-methylphenyl)- (9CI) (CA INDEX NAME)

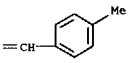


RN 243847-62-3 CAPLUS
CN 2,6,11-Triphenylenetriamine, N,N,N',N',N'',N''-hexakis(3-methylphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 28 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

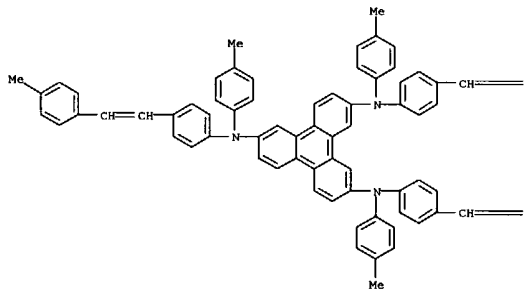
PAGE 1-B





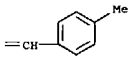
RN 243847-64-5 CAPLUS
CN 2,6,11-Triphenylenetriamine, N,N',N''-tris(4-methylphenyl)-N,N',N''-tris[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

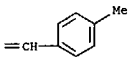
PAGE 1-A



L10 ANSWER 28 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B





L10 ANSWER 29 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The title photoreceptor comprises a conductive support coated with a photosensitive layer of which the surface layer containing a straight-chain resin which has charge-transporting ability and contains a repeating unit having arylamine and siloxane structures. The photoreceptor shows high mech. strength, photosensitivity, and durability in repeated use.

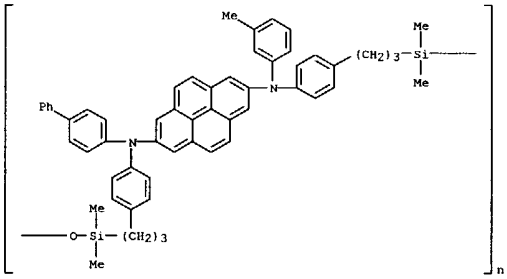
ACCESSION NUMBER: 1999:490262 CAPLUS
DOCUMENT NUMBER: 131:163351
TITLE: Electrophotographic photoreceptor with surface layer containing polymer having arylamine and siloxane structures
INVENTOR(S): Tanaka, Takakazu; Hirano, Hidetoshi
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11212290	A2	19990806	JP 1998-16777	19980129

PRIORITY APPLN. INFO.: JP 1998-16777 19980129

IT **237426-13-0**
RL: DEV (Device component use); USES (Uses)
(electrophotog. photoreceptor with surface layer containing polymer having arylamine and siloxane structures)

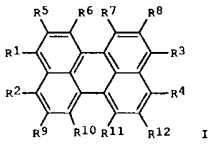
RN 237426-13-0 CAPLUS
CN Poly[oxy(dimethylsilylene)-1,3-propanediyl-1,4-phenylene([1,1'-biphenyl]-4-ylimino)-2,7-pyrenediyl[(3-methylphenyl)imino]-1,4-phenylene-1,3-propanediyl(dimethylsilylene)] (9CI) (CA INDEX NAME)



L10 ANSWER 29 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L10 ANSWER 30 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

GI



I

AB The device comprises an anode and cathode sandwiching a light-emitting layer-containing organic thin film layer, in which the organic layer contains a perylene compound I [R1-4 = H, OH, NH2, NO2, alkyl, alkenyl, cycloalkyl, alkoxy, aromatic hydrocarbon, aromatic heterocyclic, aralkyl, aryloxy, NAr1Ar2; Ar1, 2 = C6-20 aryl; R5-12= H, halogen, OH, NH2, NO2, cyano, alkyl, alkenyl, cycloalkyl, alkoxy, aromatic hydrocarbon, aromatic heterocyclic, aralkyl, aryloxy, CO2H; R1-4 or R5-12 (not diarylamino) may bond to form a ring, resp.]. The device shows high luminance.

ACCESSION NUMBER: 1999:341107 CAPLUS
DOCUMENT NUMBER: 131:37591
TITLE: Organic electroluminescent device containing perylene compound
INVENTOR(S): Touguchi, Itaru; Oda, Atsushi; Ishikawa, Hitoshi
PATENT ASSIGNEE(S): NEC Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

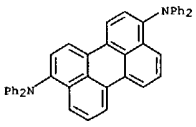
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11144869	A2	19990528	JP 1997-303048	19971105
JP 3084708	B2	20000904		
US 6329083	B1	20011211	US 1998-186081	19981105
US 2002028350	A1	20020307	US 2001-961230	20010924

PRIORITY APPLN. INFO.:
JP 1997-303047 A 19971105
JP 1997-303048 A 19971105
JP 1997-357022 A 19971225
JP 1998-886 A 19980106
US 1998-186081 A3 19981105

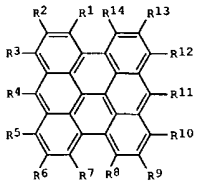
OTHER SOURCE(S): MARPAT 131:37591

IT **227009-36-1P**
RL: DEV (Device component use); IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(organic electroluminescent device containing perylene compound)

RN 227009-36-1 CAPLUS
CN 3,10-Perylenediamine, N,N,N',N'-tetraphenyl- (9CI) (CA INDEX NAME)



GI



I

AB The device comprises an anode and cathode sandwiching a light-emitting layer-containing organic thin film layer, in which the organic layer contains a bisanthrone compound I [R1-14 = H, halogen, OH, NH2, NO2, cyano, alkyl, alkenyl, cycloalkyl, alkoxy, aromatic hydrocarbon, aromatic heterocyclic, aralkyl, aryloxy; R1-14 may bond to form a ring]. The device shows high luminance.

ACCESSION NUMBER: 1999:341106 CAPLUS
DOCUMENT NUMBER: 131:37590
TITLE: Organic electroluminescent device containing bisanthrone compound
INVENTOR(S): Higashiguchi, Itaru; Oda, Atsushi; Ishikawa, Hitoshi
PATENT ASSIGNEE(S): NEC Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11144868	A2	19990528	JP 1997-303047	19971105
JP 3005980	B2	20000207		
US 6329083	B1	20011211	US 1998-186081	19981105
US 2002028350	A1	20020307	US 2001-961230	20010924

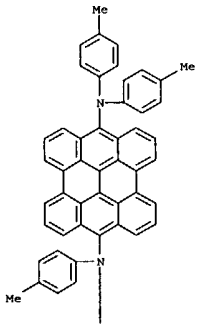
PRIORITY APPLN. INFO.: JP 1997-303047 A 19971105
JP 1997-303048 A 19971105
JP 1997-357022 A 19971225
JP 1998-886 A 19980106
US 1998-186081 A3 19981105
OTHER SOURCE(S): MARPAT 131:37590

IT **227010-24-4P 227010-25-5P**
RL: DEV (Device component use); IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(organic electroluminescent device containing bisanthrone compound)

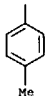
RN 227010-24-4 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N,N',N'-tetrakis(4-

methylphenyl)- (9CI) (CA INDEX NAME)

PAGE 1-A

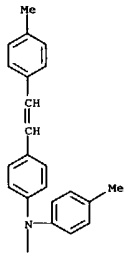


PAGE 2-A

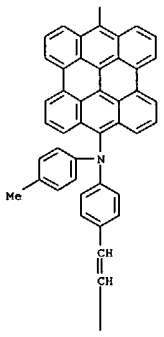


RN 227010-25-5 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N'-bis(4-methylphenyl)-N,N'-bis[4-[2-(4-methylphenyl)ethenyl]phenyl]- (9CI) (CA INDEX NAME)

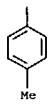
PAGE 1-A



PAGE 2-A

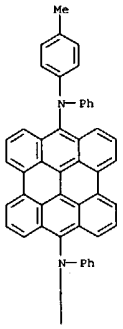


PAGE 3-A

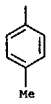


IT **227010-28-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(organic electroluminescent device containing bisanthrone compound)
RN 227010-28-8 CAPLUS
CN Phenanthro[1,10,9,8-opqra]perylene-7,14-diamine, N,N'-bis(4-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)

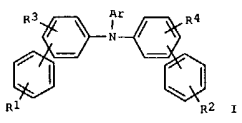
PAGE 1-A



PAGE 2-A



GI



I

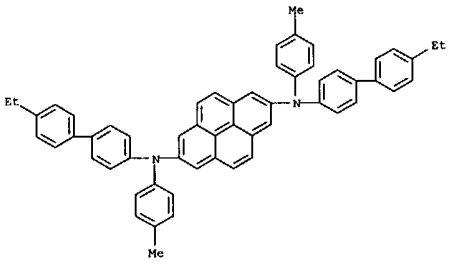
AB The title photoreceptor comprises a conductive support coated with a photosensitive layer containing a compound I [R1, R2 = H, amino, (substituted) dialkylamino, alkoxy, thioalkoxy, aryloxy, (substituted) alkyl, halo, (substituted) aryl; R3, R4 = H, alkoxy, (substituted) alkyl, halo; Ar = (substituted) monocyclic aromatic hydrocarbon, (substituted) non-condensed polycyclic aromatic hydrocarbon, (substituted) heterocycle] and a compound [A(CH:CH)nCR:CH]2(CH2)m [II; A = 9-anthryl, (substituted) N-substituted carbazolyl, N-substituted phenothiazinyl, ArNR1R2 [Ar = (substituted) arylene; R1, R2 = (substituted) alkyl, (substituted) aralkyl, (substituted) aryl]; R = H, (substituted) alkyl, (substituted) aralkyl, (substituted) aryl; m = 2-8; n = 0 or 1]. 22 Types of compds. may be used instead of I and II. The photoreceptor shows high photosensitivity, stable charging properties, and improved durability in repeated use.

ACCESSION NUMBER: 1999:157136 CAPLUS
DOCUMENT NUMBER: 130:244425
TITLE: Electrophotographic photoreceptor using specific two types of charge-transporting materials
INVENTOR(S): Kurimoto, Eiji; Umeda, Minoru; Ikegami, Takaaki; Sakon, Yota
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 384 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

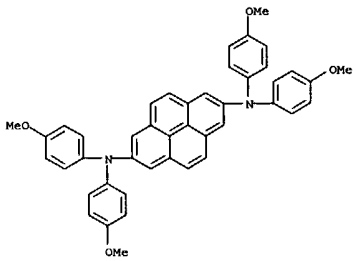
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11065140	A2	19990305	JP 1997-239555	19970815

PRIORITY APPLN. INFO.: JP 1997-239555 19970815

IT **213967-16-9 221308-45-8**
RL: DEV (Device component use); USES (Uses)
(electrophotog. photoreceptor containing two-types of charge-transporting agents)
RN 213967-16-9 CAPLUS
CN 2,7-Pyrenediamine, N,N'-bis(4'-ethyl[1,1'-biphenyl]-4-yl)-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



RN 221308-45-8 CAPLUS
CN 2,7-Pyrenediamine, N,N,N',N'-tetrakis(4-methoxyphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 33 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB Organic compds. are described which are represented by the general formula

Ar1(Ar3)N-X-NAr2(Ar4) (X = (un)substituted arylene group or (un)substituted heterocyclic group; and each of at least 2 groups among Ar1, Ar2, Ar3, and Ar4 = (un)substituted fluorenyl, and the remainder = (un)substituted aryl). Electroluminescent devices formed of a pair of electrodes and an organic layer including ≥1 of the compds described above interposed between the electrodes are also described. Preparation of the compds entails reacting I-X-I with compds. described by the general formula HNArAr' (Ar, Ar' = desired (un)substituted fluorenyl and (un)substituted aryl groups).

ACCESSION NUMBER: 1998:764221 CAPLUS
DOCUMENT NUMBER: 130:30988
TITLE: Organic compound and electroluminescent device using the same
INVENTOR(S): Senoo, Akihiko; Toshida, Yomishi; Hashimoto, Yuichi; Ueno, Kazunori; Mashimo, Seiji; Urakawa, Shinichi
PATENT ASSIGNEE(S): Canon Kabushiki Kaisha, Japan
SOURCE: Eur. Pat. Appl., 57 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

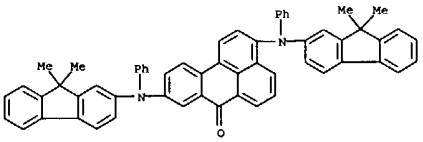
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 879868	A2	19981125	EP 1998-303790	19980514
EP 879868	A3	19990107		
EP 879868	B1	20020403		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11035532	A2	19990209	JP 1998-145179	19980512
JP 3508984	B2	20040322		
US 6517957	B1	20030211	US 1998-78570	19980514
US 2003157364	A1	20030821	US 2002-266602	20021009

PRIORITY APPLN. INFO.: JP 1997-142958 A 19970519
US 1998-78570 A3 19980514
OTHER SOURCE(S): MARPAT 130:30988

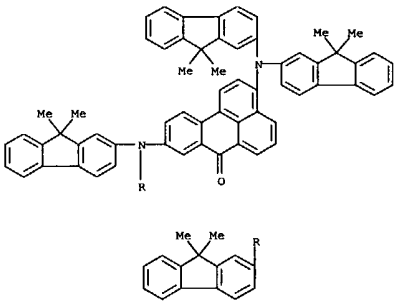
IT **216454-15-8P 216454-49-8P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(organic diamino compds. and their preparation and electroluminescent devices using them)

RN 216454-15-8 CAPLUS
CN 7H-Benz[de]anthracen-7-one, 3,9-bis[(9,9-dimethyl-9H-fluoren-2-yl)phenylamino]- (9CI) (CA INDEX NAME)

L10 ANSWER 33 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 216454-49-8 CAPLUS
CN 7H-Benz[de]anthracen-7-one, 3,9-bis[bis(9,9-dimethyl-9H-fluoren-2-yl)amino]- (9CI) (CA INDEX NAME)



L10 ANSWER 34 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN

AB The styryl-containing polymer is represented by [Ar1CH:CHAr2N(Ar3)[Ar5N(Ar6)]m Ar4CH:CH]n (Ar1-2, Ar4 = arylene; Ar5 = arylene, 2-valent condensed polycyclic group; Ar3, Ar6 = alkyl, aralkyl, aryl; Ar1-6 may be substituted; m = 0-3; n = natural number). The above polymer is manufactured by the reaction between a P compound XCH2Ar1CH2X [X = PO(OR1)2 or PR23.Y; R1 = lower alkyl; R2 = cycloalkyl, aryl; Y = halo] and an aldehyde compound OCHAr2N(Ar3)[Ar5N(Ar6)]mAr4CHO. The electroluminescent device contains the polymer in ≥1 organic compound thin layer including a light-emitting layer and the photoreceptor contains the polymer as a charge-transporting material. The hole-transporting material composed of the polymer is also claimed. The styryl-containing polymer shows good performance in charge-transporting and optical conductivity even after repeated use.

ACCESSION NUMBER: 1998:758676 CAPLUS
DOCUMENT NUMBER: 130:73811
TITLE: Styryl-containing polymer, its manufacture, and organic electroluminescent device, electrophotographic photoreceptor, and hole-transporting material using it
INVENTOR(S): Ueda, Hideaki; Kitahora, Takeshi; Nozaki, Takeshi
PATENT ASSIGNEE(S): Minolta Camera Co., Ltd., Peop. Rep. China
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10310635	A2	19981124	JP 1997-119192	19970509
US 6066712	A	20000523	US 1998-74914	19980508

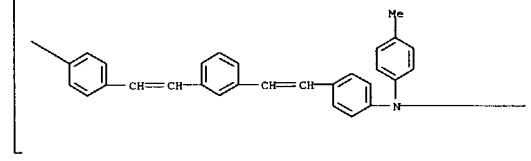
PRIORITY APPLN. INFO.: JP 1997-119192 19970509
JP 1997-119194 19970509

IT **217632-47-8**
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(styryl-containing polymer as charge-transporting material for organic electroluminescent device and electrophotog. photoreceptor)

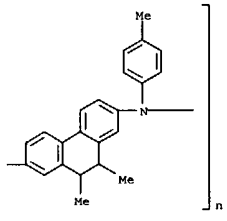
RN 217632-47-8 CAPLUS
CN Poly[[(4-methylphenyl)imino](9,10-dihydro-9,10-dimethyl-2,7-phenanthrenediyl)[(4-methylphenyl)imino]-1,4-phenylene-1,2-ethenediyl-1,3-phenylene-1,2-ethenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

L10 ANSWER 34 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

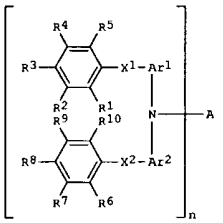
PAGE 1-A



PAGE 1-B



L10 ANSWER 35 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



AB The title material comprises an aromatic amine compound described by the general formula I [n = 3-15; A = group containing (un)substituted (condensed) aromatic or heterocyclic aromatic group; A ≠ Q; Ar1-2 = (un)substituted (condensed) aromatic group; X1-2 = O, S, CO, SO2, CxH2xOCyH2y; (un)substituted C1-20 alkylidene, alkylene, (un)substituted divalent alicyclic group; x, y = 0-20; x + y ≠ 0; R1-10 = H, halo, (un)substituted alkyl, alkoxy, aromatic group, heterocyclic aromatic group, amino; R1-5 or R6-10 may form ring]. The device has a light-emitting layer containing I. The device showed high luminance and luminescent efficiency and long lifetime.

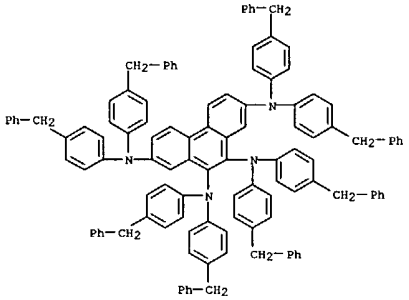
ACCESSION NUMBER: 1998:735541 CAPLUS
DOCUMENT NUMBER: 130:58899
TITLE: Aromatic amine compound luminescent material and electroluminescent device with high luminance and luminescent efficiency using it
INVENTOR(S): Onikubo, Shunichi; Okutsu, Satoshi; Tamano, Michiko; Enokida, Toshio
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10302960	A2	19981113	JP 1997-112088	19970430
JP 3498533	B2	20040216		

PRIORITY APPLN. INFO.: JP 1997-112088 19970430
OTHER SOURCE(S): MARPAT 130:58899
IT **216974-93-5 216974-94-6 216975-27-8**
RL: DEV (Device component use); USES (Uses)

L10 ANSWER 35 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(arom. amine-based emitting materials for electroluminescent devices)

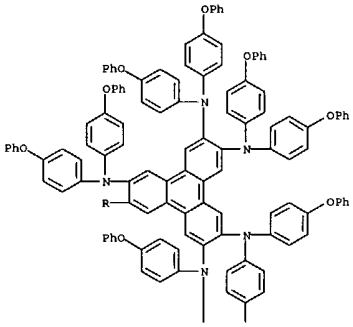
RN 216974-93-5 CAPLUS
CN 2,7,9,10-Phenanthrenetetramine, N,N,N',N',N'',N'',N''',N'''-octakis[4-(phenylmethyl)phenyl]- (9CI) (CA INDEX NAME)



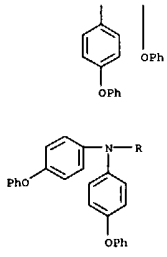
RN 216974-94-6 CAPLUS
CN 2,3,6,7,10,11-Triphenylenehexamine, N,N,N',N',N'',N'',N''',N''',N'''',N'''',N''''',N''''',N''''''-dodecakis(4-phenoxyphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 35 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



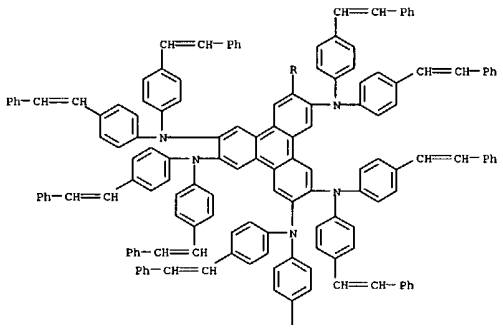
PAGE 2-A



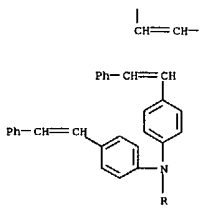
RN 216975-27-8 CAPLUS
CN 2,3,6,7,10,11-Triphenylenehexamine, N,N,N',N',N'',N'',N''',N''',N'''',N'''',N''''',N''''',N''''''-dodecakis[4-(2-phenylethenyl)phenyl]- (9CI) (CA INDEX NAME)

L10 ANSWER 35 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

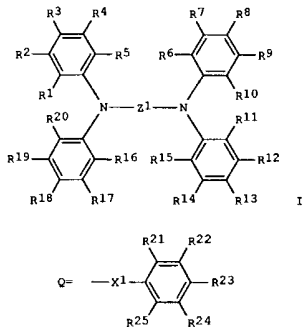
PAGE 1-A



PAGE 2-A



L10 ANSWER 36 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



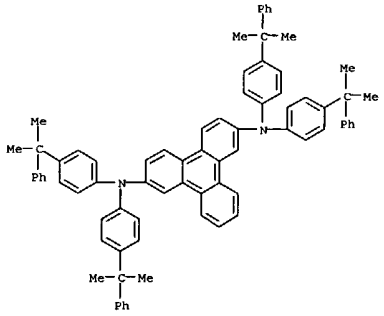
AB The material has a formula I [R1-20 = H, halo, alkyl, alkoxy, thioalkoxy, amino, monocyclic group, polycyclic group, Q; R21-25 = H, halo, alkyl, alkoxy, thioalkoxy, amino, monocyclic group, polycyclic group; R21-25 may form a cycloalkyl ring, aryl ring; X1 = direct bond, alkylene, (CR26R27)xO(CR28R29)y, (CR30R31)xS(CR32R33)y, O, S, CO, SO2, SiR34(R35), NR36, PR37, PO(R38); x, y = 0-8 integer; x + y ≠ 0; Z1 = Ar1, Ar2NR39Ar3, Ar4NR40Ar5NR41Ar6; Ar1-6 = arylene; R26-41 = alkyl, monocyclic group, polycyclic group]. The device shows high luminance, efficiency, long life, and storage stability.

ACCESSION NUMBER: 1998:651124 CAPLUS
DOCUMENT NUMBER: 129:308409
TITLE: Positive-hole injection material for organic electroluminescent device
INVENTOR(S): Enokida, Toshio; Onikubo, Shunichi; Tamano, Michiko; Okutsu, Satoshi
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 43 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

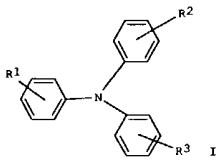
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10265773	A2	19981006	JP 1997-69911	19970324
PRIORITY APPLN. INFO.:			JP 1997-69911	19970324

L10 ANSWER 36 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

OTHER SOURCE(S): MARPAT 129:308409
IT **214338-09-7**
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(organic electroluminescent device containing aromatic pos.-hole injection material)
RN 214338-09-7 CAPLUS
CN 2,7-Triphenylenediamine, N,N,N',N'-tetrakis[4-(1-methyl-1-phenylethyl)phenyl]- (9CI) (CA INDEX NAME)



L10 ANSWER 37 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



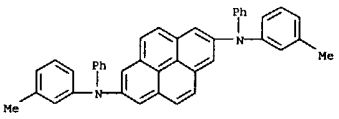
AB The title photoreceptor comprises a conductive support coated with a photosensitive layer containing a divinylbenzene derivative o-RCH:CHC6H4CH:CHR [I; R = carbazolyl, pyridyl, thienyl, indolyl, furyl, (un)substituted Ph, (un)substituted styryl, (un)substituted naphthyl, (un)substituted anthryl (the substituent is selected from di-lower-alkylamino, lower alkyl, lower alkoxy, halo, aralkylamino, and amino)] and a triphenylamine derivative II (R1-R3 = H, lower alkyl, lower alkoxy, Ph, PhO, halo). Alternatively, 28 types of aromatic amines may be used in place of II. The photoreceptor may comprise a conductive support laminated with a charge-generating layer containing a charge-generating agent and a charge-transporting layer containing I and 1 compound selected from II and the 28 types of compds. The photoreceptor shows high photosensitivity and durability in repeated use.

ACCESSION NUMBER: 1998:627446 CAPLUS
DOCUMENT NUMBER: 129:296148
TITLE: Electrophotographic photoreceptor
INVENTOR(S): Sakon, Yota; Umeda, Minoru; Ikegami, Takaaki; Kurimoto, Eiji
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 274 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10254154	A2	19980925	JP 1997-76650	19970312
PRIORITY APPLN. INFO.:			JP 1997-76650	19970312

OTHER SOURCE(S): MARPAT 129:296148
IT **143141-30-4**
RL: DEV (Device component use); USES (Uses)
(electrophotog. photoreceptor containing divinylbenzene derivative combined with aromatic amine)
RN 143141-30-4 CAPLUS
CN 2,7-Pyrenediamine, N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)

L10 ANSWER 37 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L10 ANSWER 38 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

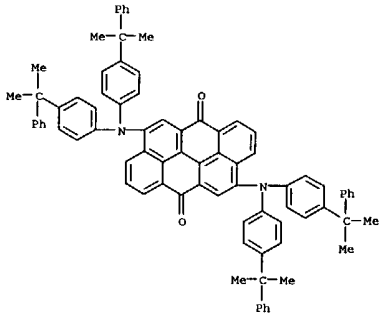
AB The claimed compound is I [A = aromatic (condensed) ring, (condensed) heterocycle excluding Q1 (E = H or linkage), bivalent group comprising ≥2 kinds of 2-10 above ring systems which are connected directly or via O, N, S, C1-20 chain, nonarom. cycle, where the case of A = Q3 is excluded; Ar1-4 = (condensed) aromatic group; X1-4 = O, S, CO, SO2, CxH2xOCyH2y (x, y = 0-20; x + y ≠ 0), C2-20 alkyl(id)ene, bivalent alicyclic group; R1-20 = H, halo, alkyl (oxy), aromatic ring, aromatic heterocycle, amino]. Also claimed is an organic electroluminescent device containing I with high luminance and good stability in repeated uses.

ACCESSION NUMBER: 1998:614437 CAPLUS
DOCUMENT NUMBER: 129:295965
TITLE: Organic electroluminescent device with high luminance and polycyclic phosphorescent compound therefor
INVENTOR(S): Onikubo, Shunichi; Tamano, Michiko; Okutsu, Satoshi; Enokida, Toshio
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 59 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

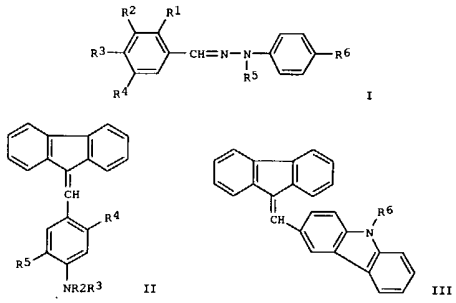
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10251633	A2	19980922	JP 1997-62568	19970317
JP 3503403	B2	20040308		
EP 866110	A1	19980923	EP 1998-301986	19980317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 934992	A1	19990811	EP 1999-106698	19980317
R: DE, FR, GB				
US 6280859	B1	20010828	US 1998-42569	19980317
US 2001033944	A1	20011025		

PRIORITY APPLN. INFO.: JP 1997-62568 A 19970317
JP 1998-301986 A3 19980317
OTHER SOURCE(S): MARPAT 129:295965
IT **213968-49-1**
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(luminescent material; organic electroluminescent device containing polycyclic phosphorescent compound with high luminance)
RN 213968-49-1 CAPLUS
CN Dibenzo[def,mno]chrysene-6,12-dione, 4,10-bis[bis[4-(1-methyl-1-phenylethyl)phenyl]amino]- (9CI) (CA INDEX NAME)

L10 ANSWER 38 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L10 ANSWER 39 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I II III

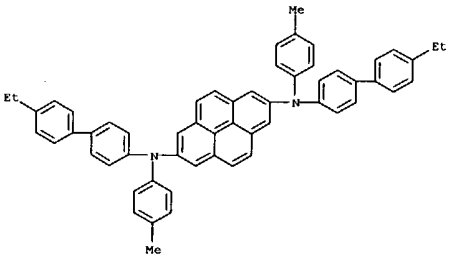
AB The title photoreceptor contains I (R1-4, R6 = H, halo, lower alkyl, lower alkoxy, di-lower alkylamino, dibenzylamino; R5 = lower alkyl, benzyl) and II (R1 = H, halo, CN, lower alkyl; R2, R3 = H, lower alkyl, benzyl; R4, R5 = H, halo, lower alkyl, lower alkoxy, di-lower alkylamino) or III (R1 = H, halo, CN, lower alkyl; R6 = H, lower alkyl, benzyl) in a photosensitive layer. Other charge transport materials are also claimed with Markush structures.

ACCESSION NUMBER: 1998:594740 CAPLUS
DOCUMENT NUMBER: 129:283407
TITLE: Electrophotographic photoreceptor with improved sensitivity and durability
INVENTOR(S): Umeda, Minoru; Sakon, Yota; Ikegami, Takaaki; Kurimoto, Eiji
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 223 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

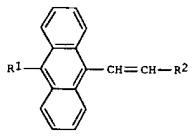
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10239879	A2	19980911	JP 1997-62270	19970228

PRIORITY APPLN. INFO.: JP 1997-62270 19970228
OTHER SOURCE(S): MARPAT 129:283407
IT **213967-16-9**
RL: DEV (Device component use); USES (Uses)
(charge transport material in electrophotog. photoreceptor with improved sensitivity and durability)
RN 213967-16-9 CAPLUS
CN 2,7-Pyrenediamine, N,N'-bis(4'-ethyl[1,1'-biphenyl]-4-yl)-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)

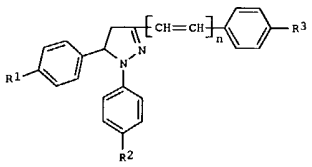
L10 ANSWER 39 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L10 ANSWER 40 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I



II

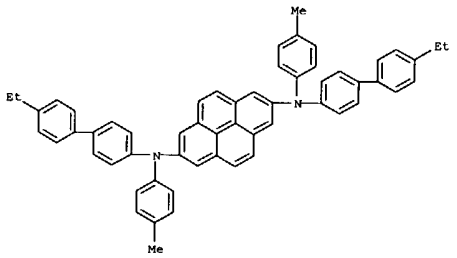
AB The title photoreceptor contains I (R1 = H, halo; R2 = aromatic, heterocyclyl) and II (R1, R3 = H, lower alkyl, lower alkoxy, di-lower alkylamino; R2 = H, lower alkyl, lower alkoxy, halo, NO2; n = 0, 1) in a photosensitive layer. Other charge transport materials are also claimed with Markush structures.

ACCESSION NUMBER: 1998:594739 CAPLUS
DOCUMENT NUMBER: 129:283406
TITLE: Electrophotographic photoreceptor with improved sensitivity and durability
INVENTOR(S): Umeda, Minoru; Sakon, Yota; Ikegami, Takaaki; Kurimoto, Eiji
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 227 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

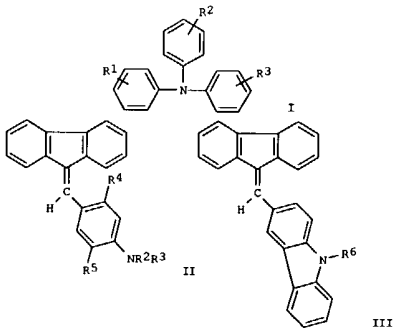
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10239877	A2	19980911	JP 1997-54083	19970221

PRIORITY APPLN. INFO.: JP 1997-54083 19970221
OTHER SOURCE(S): MARPAT 129:283406
IT **213967-16-9**
RL: DEV (Device component use); USES (Uses)

L10 ANSWER 40 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(charge transport material in electrophotog. photoreceptor with improved sensitivity and durability)
RN 213967-16-9 CAPLUS
CN 2,7-Pyrenediamine, N,N'-bis(4'-ethyl[1,1'-biphenyl]-4-yl)-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 41 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I II III

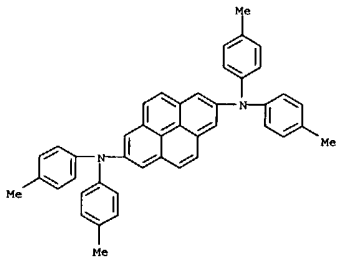
AB The title photoreceptor contains I (R1, R2, R3 = H, lower alkyl, lower alkoxy, Ph, phenoxy, halo), II (R1 = H, halo, CN, lower alkyl; R2, R3 = H, lower alkyl, benzyl; R4, R5 = H, halo, lower alkyl, lower alkoxy, di-lower alkylamino) and III (R1 = H, halo, CN, lower alkyl; R6 = H, lower alkyl, benzyl) in a photosensitive layer. 26 More charge transport materials with Markush structures are also claimed.

ACCESSION NUMBER: 1998:590839 CAPLUS
DOCUMENT NUMBER: 129:283403
TITLE: Electrophotographic photoreceptor with improve sensitivity and durability
INVENTOR(S): Kurimoto, Eiji; Umeta, Minoru; Sakon, Yota; Ikeue, Takaaki
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 240 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10239872	A2	19980911	JP 1997-55642	19970224

PRIORITY APPLN. INFO.: JP 1997-55642 19970224
OTHER SOURCE(S): MARPAT 129:283403
IT **163969-53-7**

L10 ANSWER 41 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
RL: DEV (Device component use); USES (Uses)
(charge transport material in electrophotog. photoreceptor with improve
sensitivity and durability)
RN 163969-53-7 CAPLUS
CN 2,7-Pyrenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 42 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Compds. suitable for use in electroluminescent devices are described by the general formulas I, II, and III (R1 to R17 are organic residues, X1 to X18 are heteroatoms and A1 and A2 are chemical rational organic residues composed of C, H and O atoms or of C, H, O, and S atoms, having mol. weight of ≤500). The compds. may be hole-transporting or hole-injecting compds. Electroluminescent devices employing the compds. are also described.

ACCESSION NUMBER: 1998:388451 CAPLUS
DOCUMENT NUMBER: 129:73815
TITLE: Material for organoelectroluminescence device and use thereof
INVENTOR(S): Enokida, Toshio; Onikubo, Toshikazu; Okutsu, Satoshi; Tamano, Michiko
PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 56 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 847228	A2	19980610	EP 1997-309922	19971209
EP 847228	A3	19980902		
EP 847228	B1	20030416		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 10284255	A2	19981023	JP 1997-87802	19970407
JP 10294180	A2	19981104	JP 1997-102863	19970421
JP 11008072	A2	19990112	JP 1997-306786	19971110
US 6150042	A	20001121	US 1997-986788	19971208
EP 1191020	A2	20020327	EP 2001-126365	19971209
EP 1191020	A3	20030115		
R: DE, FR, GB				
US 6245449	B1	20010612	US 1999-447959	19991129
JP 2004124101	A2	20040422	JP 2003-387522	20031118

PRIORITY APPLN. INFO.:
JP 1996-328069 A 19961209
JP 1997-87802 A 19970407
JP 1997-102863 A 19970421
JP 1997-102866 A 19970421
JP 1997-306786 A3 19971110
US 1997-986788 A3 19971208
EP 1997-309922 A3 19971209

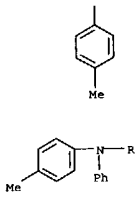
OTHER SOURCE(S): MARPAT 129:73815

IT **208939-41-7 208939-42-8**
RL: DEV (Device component use); USES (Uses)
(triphenylene derivative-based electroluminescent and hole-injecting materials for electroluminescent device)

RN 208939-41-7 CAPLUS

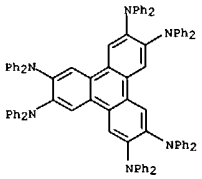
L10 ANSWER 42 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 2-A



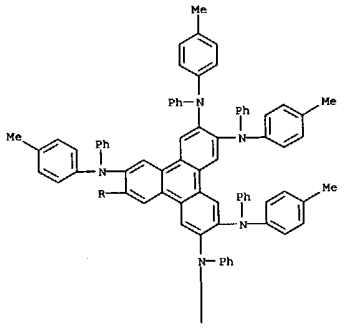
L10 ANSWER 42 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

CN 2,3,6,7,10,11-Triphenylenehexamine, N,N,N',N',N'',N'',N''',N''',N'''',N'''',N''''',N'''''-dodecaphenyl- (9CI) (CA INDEX NAME)

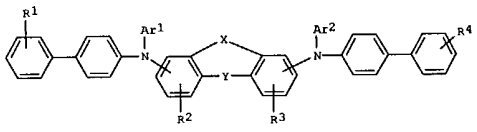


RN 208939-42-8 CAPLUS
CN 2,3,6,7,10,11-Triphenylenehexamine, N,N',N'',N''',N'''',N'''''-hexakis(4-methylphenyl)-N,N',N'',N''',N'''',N'''''-hexaphenyl- (9CI) (CA INDEX NAME)

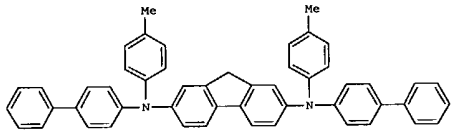
PAGE 1-A



L10 ANSWER 43 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I



II

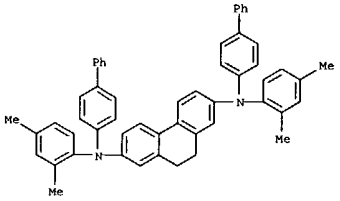
AB The title photoreceptors comprise a conductive support coated with a photosensitive layer containing a diamino compound I [Ar1, Ar2 = alkyl, aralkyl, aryl, heterocycle (these groups may be substituted); R1-4 = H, alkyl, alkoxy, halo; X = O, S, R5CR6, NR7 (R5-7 = H, alkyl or aryl), N:N, C2H4, CH:CH; Y = CH2, C2H4, CH:CH]. The photoreceptors show high photosensitivity and durability in repeated use. Thus, an Al substrate was coated with a charge-generating layer containing a bisazo compound and with a charge-transporting layer containing II to give a photoreceptor.

ACCESSION NUMBER: 1996:67472 CAPLUS
DOCUMENT NUMBER: 124:215970
TITLE: Electrophotographic photoreceptors using novel diamino compound
INVENTOR(S): Ueda, Hideaki
PATENT ASSIGNEE(S): Minoruta Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

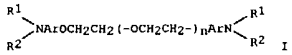
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07287408	A2	19951031	JP 1994-81594	19940420

PRIORITY APPLN. INFO.: JP 1994-81594 19940420

L10 ANSWER 43 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
OTHER SOURCE(S): MARPAT 124:215970
IT **174459-38-2**
RL: DEV (Device component use); USES (Uses)
(electrophotog. photoreceptor using diamino compound as charge-transporting agent)
RN 174459-38-2 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis([1,1'-biphenyl]-4-yl)-N,N'-bis(2,4-dimethylphenyl)-9,10-dihydro- (9CI) (CA INDEX NAME)



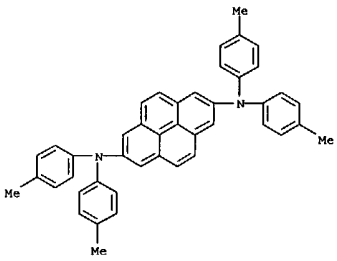
L10 ANSWER 44 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



AB In the title electrophotog. photoreceptor comprising a charge-generating layer and a charge-transporting layer on an elec. conductive support, the charge-generating layer contains I (Ar = phenylene, biphenylene; R1,2 = alkyl, aryl; n = 1-4), or other compds. specified. This photoreceptor shows high sensitivity and good chargeability.
ACCESSION NUMBER: 1995:623514 CAPLUS
DOCUMENT NUMBER: 123:22137
TITLE: Electrophotographic photoreceptor
INVENTOR(S): Umeda, Minoru; Niimi, Tatsuya
PATENT ASSIGNEE(S): Ricoh Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 130 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

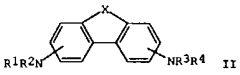
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07072634	A2	19950317	JP 1993-294803	19931029
PRIORITY APPLN. INFO.:			JP 1993-177394	19930624

IT **163969-53-7**
RL: DEV (Device component use); USES (Uses)
(electrophotog. photoreceptor charge-generating layer from)
RN 163969-53-7 CAPLUS
CN 2,7-Pyrenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



L10 ANSWER 44 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

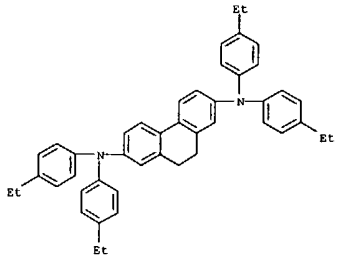
L10 ANSWER 45 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



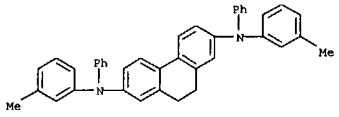
AB Claimed are (1) an electrophotog. photoconductor having a photosensitive layer, which comprises at least a charge-generating layer containing titanyloxophthalocyanine (I) and a charge-transporting layer containing ≥1 condensed aromatic cyclic derivs. II [R1-4 = (substituted) alkyl, aralkyl, aryl; X = CH2CH2, CH:CH], on an elec. conductive support, (2) an electrophotog. device using the photoconductor, and (3) a facsimile having the device and a receptor for image from remote terminal. The photoconductor, e.g., a combination of I and II (R1-4 = p-ethylphenyl), is useful for repeating use.
ACCESSION NUMBER: 1993:49232 CAPLUS
DOCUMENT NUMBER: 118:49232
TITLE: Electrophotographic photoconductor containing condensed aromatic cyclic derivative, electrophotographic device, and facsimile using same
INVENTOR(S): Senoo, Akihiro; Kikuchi, Norihiro; Tanaka, Takakazu
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04186362	A2	19920703	JP 1990-314404	19901121
PRIORITY APPLN. INFO.:			JP 1990-314404	19901121

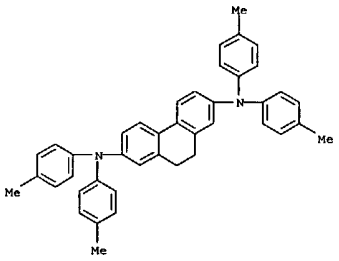
IT **113933-89-4 144726-98-7 144726-99-8 145022-08-8 145022-09-9 145022-10-2 145022-11-3 145022-12-4 145022-15-7 145022-16-8 145022-17-9 145022-18-0 145022-19-1 145257-04-1**
RL: USES (Uses)
(charge-transporting agent, for electrophotog. photoconductor, for facsimile)
RN 113933-89-4 CAPLUS
CN 2,7-Phenanthrenediamine, N,N,N',N'-tetrakis(4-ethylphenyl)-9,10-dihydro- (9CI) (CA INDEX NAME)



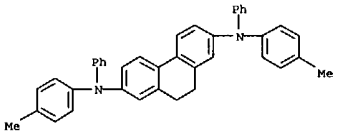
RN 144726-98-7 CAPLUS
CN 2,7-Phenanthrenediamine, 9,10-dihydro-N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



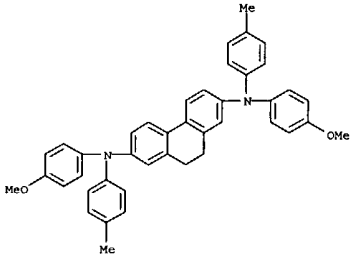
RN 144726-99-8 CAPLUS
CN 2,7-Phenanthrenediamine, 9,10-dihydro-N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



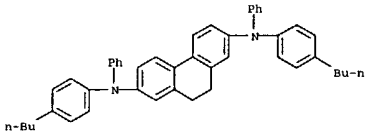
RN 145022-08-8 CAPLUS
CN 2,7-Phenanthrenediamine, 9,10-dihydro-N,N'-bis(4-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



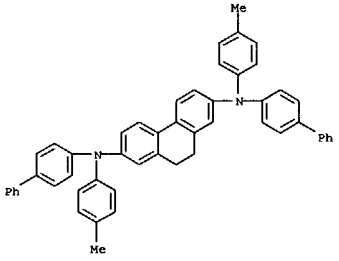
RN 145022-09-9 CAPLUS
CN 2,7-Phenanthrenediamine, 9,10-dihydro-N,N'-bis(4-methoxyphenyl)-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



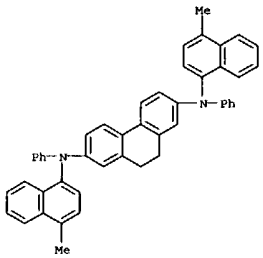
RN 145022-10-2 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis(4-butylphenyl)-9,10-dihydro-N,N'-diphenyl- (9CI) (CA INDEX NAME)



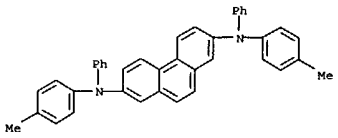
RN 145022-11-3 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis([1,1'-biphenyl]-4-yl)-9,10-dihydro-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



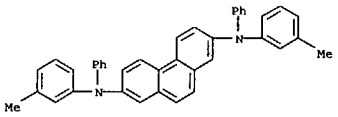
RN 145022-12-4 CAPLUS
CN 2,7-Phenanthrenediamine, 9,10-dihydro-N,N'-bis(4-methyl-1-naphthalenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



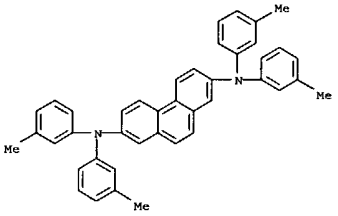
RN 145022-15-7 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis(4-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



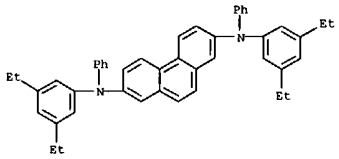
RN 145022-16-8 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



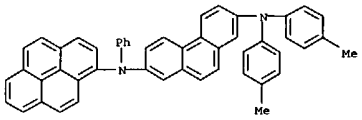
RN 145022-17-9 CAPLUS
CN 2,7-Phenanthrenediamine, N,N,N',N'-tetrakis(3-methylphenyl)- (9CI) (CA INDEX NAME)



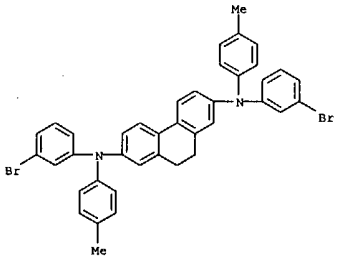
RN 145022-18-0 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis(3,5-diethylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



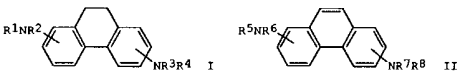
RN 145022-19-1 CAPLUS
CN 2,7-Phenanthrenediamine, N,N-bis(4-methylphenyl)-N'-phenyl-N'-1-pyrenyl- (9CI) (CA INDEX NAME)



RN 145257-04-1 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis(3-bromophenyl)-9,10-dihydro-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)



GI

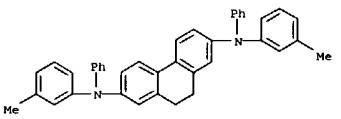


AB The photoreceptor contains oxytitanium phthalocyanine with x-ray diffraction peak (CuKα) 9.0, 14.2, 23.9, and 27.1° (Bragg angle, 20±0.2°) and a dihydrophenanthrene compound I or a phenanthrene compound II [R1-R8 = (substituted) alkyl, aralkyl, aryl]. The apparatus and facsimile using the photoreceptor are also claimed.

ACCESSION NUMBER: 1992:661648 CAPLUS
DOCUMENT NUMBER: 117:261648
TITLE: Electrophotographic photoreceptor containing oxytitanium phthalocyanine, its apparatus, and facsimile
INVENTOR(S): Kikuchi, Norihiro; Tanaka, Takakazu; Senoo, Akihiro
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

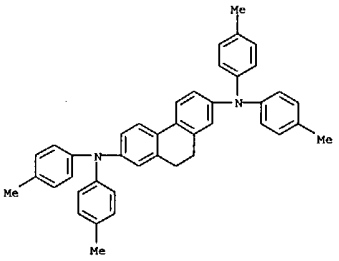
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04181260	A2	19920629	JP 1990-308727	19901116
JP 2879369	B2	19990405		

PRIORITY APPLN. INFO.: JP 1990-308727 19901116
OTHER SOURCE(S): MARPAT 117:261648
IT **144726-98-7 144726-99-8 144727-00-4 144727-01-5 144727-03-7 144727-05-9**
RL: TEM (Technical or engineered material use); USES (Uses) (electrophotog. photoreceptor charge-transporting agent)
RN 144726-98-7 CAPLUS
CN 2,7-Phenanthrenediamine, 9,10-dihydro-N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)

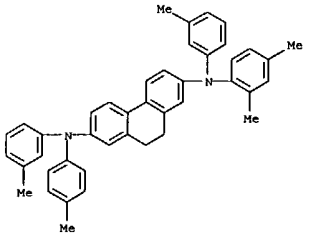


RN 144726-99-8 CAPLUS

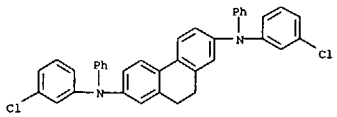
CN 2,7-Phenanthrenediamine, 9,10-dihydro-N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



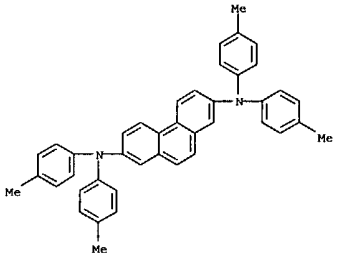
RN 144727-00-4 CAPLUS
CN 2,7-Phenanthrenediamine, N-(2,4-dimethylphenyl)-9,10-dihydro-N,N'-bis(3-methylphenyl)-N'-(4-methylphenyl)- (9CI) (CA INDEX NAME)



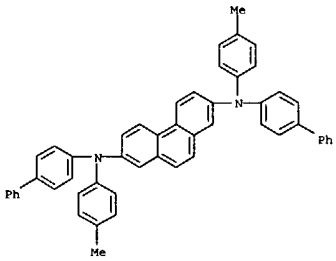
RN 144727-01-5 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis(3-chlorophenyl)-9,10-dihydro-N,N'-diphenyl- (9CI) (CA INDEX NAME)

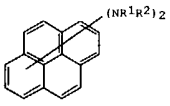


RN 144727-03-7 CAPLUS
CN 2,7-Phenanthrenediamine, N,N,N',N'-tetrakis(4-methylphenyl)- (9CI) (CA INDEX NAME)



RN 144727-05-9 CAPLUS
CN 2,7-Phenanthrenediamine, N,N'-bis([1,1'-biphenyl]-4-yl)-N,N'-bis(4-methylphenyl)- (9CI) (CA INDEX NAME)





I

AB The photoreceptors comprise a conductive support with a coating of a photosensitive layer containing ≥1 diaminopyrene compound I [R1-2 = (substituted) alkyl or aryl, except 1,6-diaminopyrene]. The photoreceptors show good photosensitivity, thermal resistance, and mech. strength. Thus, an Al vapor-deposited polyester film was coated with a charge-generating layer containing Diane Blue and a charge-transporting layer containing N,N,N',N'-tetrakis(4-methylphenyl)-1,3-diaminopyrene to give a photoreceptor.

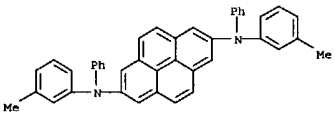
ACCESSION NUMBER: 1992:560887 CAPLUS
DOCUMENT NUMBER: 117:160887
TITLE: Electrophotographic photoreceptors using diaminopyrene compound charge-transporting agent
INVENTOR(S): Shimada, Tomoyuki; Sasaki, Masaomi; Ariga, Tamotsu
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04118658	A2	19920420	JP 1990-175561	19900702
JP 3030441	B2	20000410		

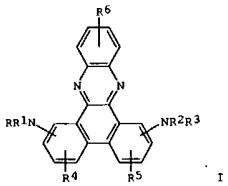
PRIORITY APPLN. INFO.: JP 1990-140887 A1 19900530

IT **143141-30-4**
RL: USES (Uses)
(charge-transporting agent, electrophotog. photoreceptor using)

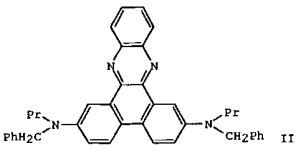
RN 143141-30-4 CAPLUS
CN 2,7-Pyrenediamine, N,N'-bis(3-methylphenyl)-N,N'-diphenyl- (9CI) (CA INDEX NAME)



L10 ANSWER 48 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I



II

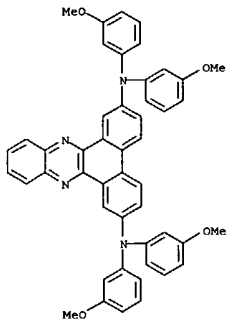
AB The title photoreceptors comprise a conductive support with a coating of a
photosensitive layer containing a phenazine derivative I [R ,R1-3= H, (substituted) alkyl, aralkyl, aryl, heterocycle, R and R1 ,R2 and R3 may form a 5- to 7- membered ring; R4-6 = H,(substituted) alkyl, alkoxy, halo,
NO2]. A photoreceptor using a bisazo pigment and II showed good photosensitivity and durability.

ACCESSION NUMBER: 1991:14907 CAPLUS
DOCUMENT NUMBER: 114:14907
TITLE: Electrophotographic photoreceptors using phenazine derivative as charge-transporting agent
INVENTOR(S): Kanamaru, Tetsuro; Kikuchi, Norihiro; Suzuki, Koichi
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

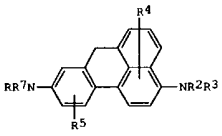
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02134644	A2	19900523	JP 1988-286861	19881115

PRIORITY APPLN. INFO.: JP 1988-286861 19881115
IT **130821-10-2**
RL: USES (Uses)

L10 ANSWER 48 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)
(charge-transporting agent, electrophotog. photoreceptor using)
RN 130821-10-2 CAPLUS
CN Dibenzo[a,c]phenazine-2,7-diamine, N,N,N',N'-tetrakis(3-methoxyphenyl)-(9CI) (CA INDEX NAME)



L10 ANSWER 49 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI



I

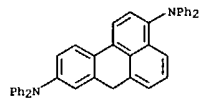
AB The electrophotog. photoreceptors have a photosensitive layer containing a
diaminobenzanthrene derivative of the formula I [R, R1-3 = (un)substituted
alkyl, aryl, aralkyl, identical or different; R4, R5 = halo, alkyl, alkoxy, NO2, CN, identical or different]. The photoreceptors exhibit good
sensitivity and durability. Thus, an Al sheet was coated with a charge-generating composition containing a bisazo pigment and a butyral resin, then
coated with a charge-transporting composition containing I (R, R1-3 = benzyl; R4,
R5 = H) and polycarbonate to give a photoreceptor, which was corona-discharged at -5 kV. The original potential, retained potential after 1 s in the dark, and exposure required to halve the retained potential were -700 V, -695 V, and 2.3 lx-s, resp.

ACCESSION NUMBER: 1990:226763 CAPLUS
DOCUMENT NUMBER: 112:226763
TITLE: Electrophotographic photoreceptors containing diaminobenzanthrene derivatives
INVENTOR(S): Shiino, Yasuko; Kikuchi, Norihiro
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

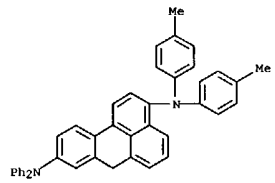
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01271755	A2	19891030	JP 1988-100366	19880425
JP 08033665	B4	19960329		

PRIORITY APPLN. INFO.: JP 1988-100366 19880425
OTHER SOURCE(S): MARPAT 112:226763
IT **127105-80-0 127105-83-3 127105-88-8**
127105-89-9
RL: USES (Uses)
(electrophotog. photoreceptor containing, for durability)
RN 127105-80-0 CAPLUS
CN 7H-Benz[de]anthracene-3,9-diamine, N,N,N',N'-tetraphenyl- (9CI) (CA INDEX NAME)

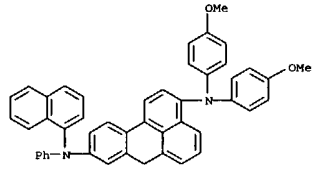
L10 ANSWER 49 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 127105-83-3 CAPLUS
CN 7H-Benz[de]anthracene-3,9-diamine, N3,N3-bis(4-methylphenyl)-N9,N9-diphenyl- (9CI) (CA INDEX NAME)

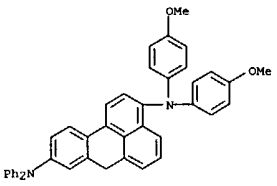


RN 127105-88-8 CAPLUS
CN 7H-Benz[de]anthracene-3,9-diamine, N3,N3-bis(4-methoxyphenyl)-N9-1-naphthalenyl-N9-phenyl- (9CI) (CA INDEX NAME)



RN 127105-89-9 CAPLUS
CN 7H-Benz[de]anthracene-3,9-diamine, N3,N3-bis(4-methoxyphenyl)-N9,N9-diphenyl- (9CI) (CA INDEX NAME)

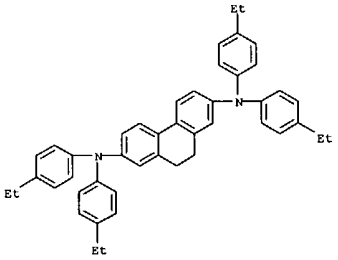
L10 ANSWER 49 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L10 ANSWER 50 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
GI For diagram(s), see printed CA Issue.
AB An electrophotog. photoreceptor is claimed which comprises a charge-transport layer containing a compound represented by I [X = moiety required for ring closure selected from O, SO, SO2, CH2CH2, CO, COCH2, CONH, N:N; R1-R4 = alkyl, aralkyl, aryl, heterocyclic group], wherein the photoreceptor is a separated function type further comprising a charge-generating layer.
ACCESSION NUMBER: 1988:177186 CAPLUS
DOCUMENT NUMBER: 108:177186
TITLE: Organic charge transport layer in electrophotographic photoreceptor
INVENTOR(S): Yamashita, Masataka; Matsumoto, Masakazu; Takiguchi, Takao; Kikuchi, Norihiro; Miyazaki, Hajime
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

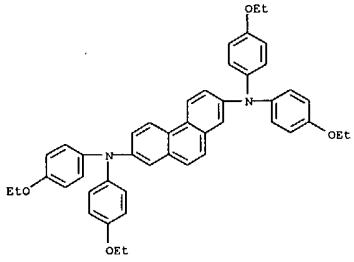
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62280850	A2	19871205	JP 1986-126855	19860530
JP 2501198	B2	19960529		

PRIORITY APPLN. INFO.: JP 1986-126855 19860530
IT **113933-89-4 113933-90-7 113933-93-0**
RL: USES (Uses)
(electrophotog. photoconductor)
RN 113933-89-4 CAPLUS
CN 2,7-Phenanthrenediamine, N,N,N',N'-tetrakis(4-ethylphenyl)-9,10-dihydro-(9CI) (CA INDEX NAME)

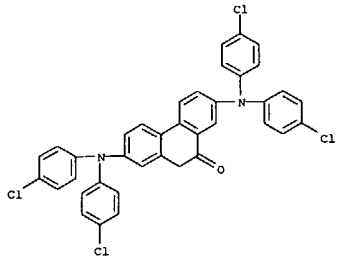


RN 113933-90-7 CAPLUS
CN 2,7-Phenanthrenediamine, N,N,N',N'-tetrakis(4-ethoxyphenyl)- (9CI) (CA INDEX NAME)

L10 ANSWER 50 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 113933-93-0 CAPLUS
CN 9(10H)-Phenanthrenone, 2,7-bis[bis(4-chlorophenyl)amino]- (9CI) (CA INDEX NAME)

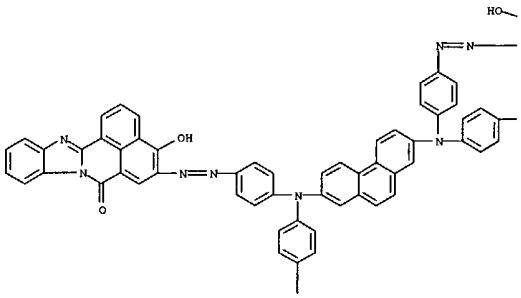


L10 ANSWER 51 OF 51 CAPLUS COPYRIGHT 2004 ACS on STN
AB The charge-generating tetrakisazo pigments have the formula (AN:NZ2)(AN:NZ3)NZ1N(Z4N:NA)(Z5N:NA)(I; A = coupler residue with a phenolic OH group; Z1 = arylene, condensed polycyclene; Z2-Z5 = arylene, condensed polycyclene, heterocyclene). An electrophotog. charge-generating layer may contain a tetrakisazo pigment of the formula
I
(A = coupler residue from 3-hydroxy-2-naphthoic acid anilide; Z1 = 3,3'-dichloro-4,4'-biphenylene; Z2-Z5 = 1,4-phenylene) and a poly(vinyl butyral) binder. It provides electrophotog. photoreceptors with improved sensitivity and voltage stability for repeated use.
ACCESSION NUMBER: 1987:565421 CAPLUS
DOCUMENT NUMBER: 107:165421
TITLE: Electrophotographic charge-generating tetrakisazo pigments
INVENTOR(S): Matsumoto, Masakazu; Takiguchi, Takao; Umehara, Masashige; Yamashita, Masataka; Ishikawa, Shozo
PATENT ASSIGNEE(S): Canon K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 6
PATENT INFORMATION:

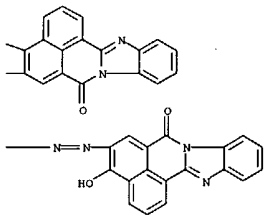
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 62018566	A2	19870127	JP 1985-157700	19850717
US 4666810	A	19870519	US 1986-852243	19860415
PRIORITY APPLN. INFO.:			JP 1985-80248	19850417
			JP 1985-157699	19850717
			JP 1985-157700	19850717
			JP 1985-159401	19850718
			JP 1985-159402	19850718
			JP 1985-159403	19850718

IT **110557-59-0 110557-60-3 110557-65-8 110557-83-0 110557-87-4 110557-89-6**
RL: USES (Uses)
(electrophotog. charge-generating pigments)
RN 110557-59-0 CAPLUS
CN 7H-Benzimidazo[2,1-a]benz[de]isoquinolin-7-one, 5,5',5'',5'''-[2,7-phenanthrenediylbis[nitrilobis(4,1-phenyleneazo)]]tetrakis[4-hydroxy-(9CI) (CA INDEX NAME)

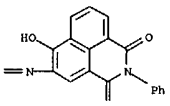
PAGE 1-A



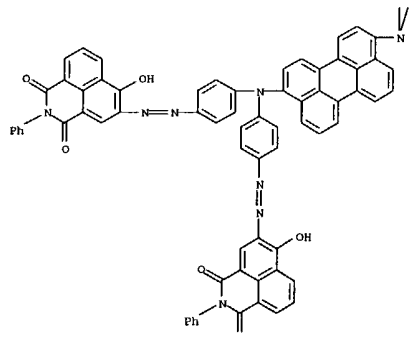
PAGE 1-B



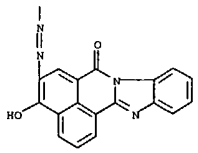
PAGE 1-B



PAGE 2-A

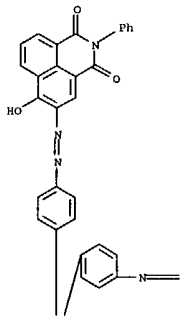


PAGE 2-A



RN 110557-60-3 CAPLUS
CN 1H-Benz[de]isoquinoline-1,3(2H)-dione, 5,5',5'',5'''-[3,10-perylenediylbis[nitrilobis(4,1-phenyleneazo)]]tetrakis[6-hydroxy-2-phenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

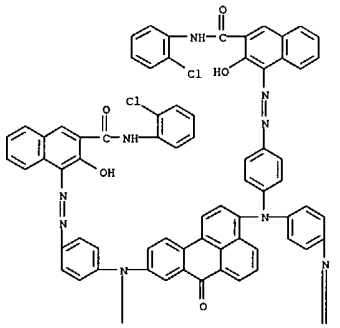


PAGE 2-B

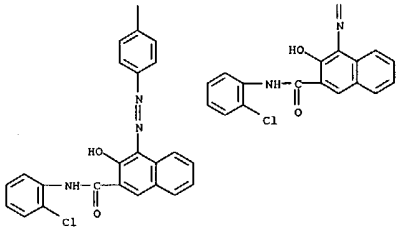
PAGE 3-A

RN 110557-65-8 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4',4'',4'''-[(7-oxo-7H-benz[de]anthracene-3,9-diyl)bis[nitrilobis(4,1-phenyleneazo)]]tetrakis[N-(2-chlorophenyl)-3-hydroxy- (9CI) (CA INDEX NAME)

PAGE 1-A

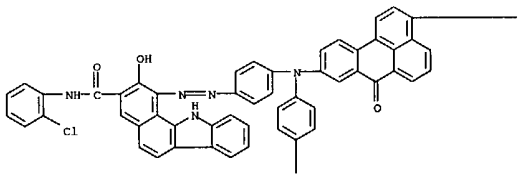


PAGE 2-A

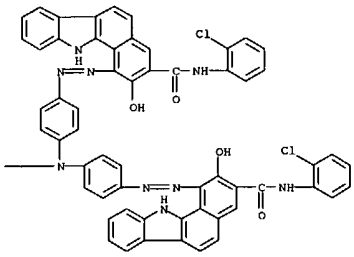


RN 110557-83-0 CAPLUS
CN 11H-Benzo[a]carbazole-3-carboxamide, 1,1',1'',1'''-[(7-oxo-7H-benz[de]anthracene-3,9-diyl)bis(nitrilobis(4,1-phenyleneazo))]tetrakis[N-(2-chlorophenyl)-2-hydroxy- (9CI) (CA INDEX NAME)

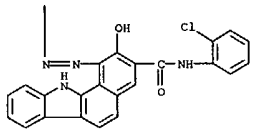
PAGE 1-A



PAGE 1-B

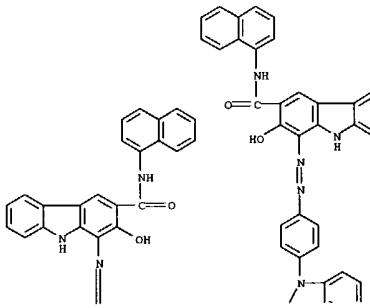


PAGE 2-A

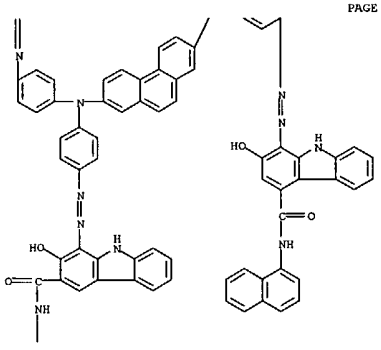


RN 110557-87-4 CAPLUS
CN 9H-Carbazole-3-carboxamide, 1,1',1'',1'''-[2,7-phenanthrenediylbis(nitrilobis(4,1-phenyleneazo))]tetrakis[2-hydroxy-N-1-naphthalenyl- (9CI) (CA INDEX NAME)

PAGE 1-A



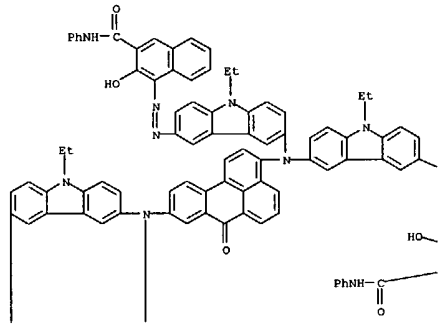
PAGE 2-A



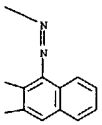
PAGE 3-A

RN 110557-89-6 CAPLUS
CN 2-Naphthalenecarboxamide, 4,4',4'',4'''-[(7-oxo-7H-benz[de]anthracene-3,9-diyl)bis[nitrilobis[(9-ethyl-9H-carbazole-3,6-diyl)azo]]]tetrakis[3-hydroxy-N-phenyl- (9CI) (CA INDEX NAME)

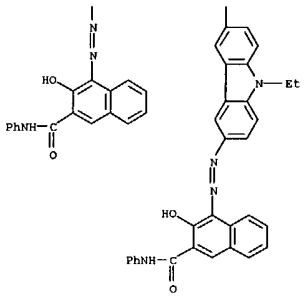
PAGE 1-A



PAGE 1-B



PAGE 2-A



=> logoff y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	244.77	714.60

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-35.34	-35.34

STN INTERNATIONAL LOGOFF AT 19:17:33 ON 08 JUN 2004